

**Playing Church: Toward a Behavioral Theological Understanding of Church Growth**

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Thesis submitted in partial fulfillment of  
the requirements for the degree of Doctor of Ministry  
in the Divinity School of Duke University  
2014

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## Abstract

Just as biological life becomes more interesting and diverse when the edges of ecosystems meet, intellectual life crackles with energy and possibility when leaders from different disciplines collaborate. The recent emergence of behavioral economics, a fusion of economic theory with psychological cognitive theory, represents the best of what can happen when different fields collide. Behavioral economists combine the sophisticated and nuanced anthropology articulated by cognitive theorists such as Nobel laureate Daniel Kahneman with classical economic theory to offer more realistic models and expanded explanatory power, giving particular insight into why humans do not always behave in ways that are purely rational and self-interested.

I will show that theological reflection and pastoral leadership, specifically, have much to gain by undertaking a similar ‘behavioral turn’ and exploring the insights cognitive theory offers. By exploring the nature and history of the behavioral turn in economics and then showing the relevance to Christology and theological anthropology, I will lay the groundwork for a ‘behavioral theology’. Behavioral theology sheds light on the Chalcedonian full divinity and humanity of Christ and underscores the view of sin as hubris. Behavioral theology also encourages pastors to see themselves as choice architects responsible for making decisions that help busy and tired congregants be the people they desire to be. Finally, I will demonstrate the experimental spirit of behavioral

theology in a study of one facet of ecclesial life: church numerical growth and decline, using an approach inspired by behavioral game theory. With the permission of Duke's Independent Review Board I observed sessions, local church governing bodies in the Presbyterian Church (U.S.A.), play two versions of a public goods game to determine whether the willingness and ability of leaders to cooperate, defect, reward, and punish one another correlates to a congregation's ability to sustain membership.

## **Dedication**

This work is dedicated to all of the men and women faithfully leading Christ's church who were once excited enough to become theologians but have allowed the church to teach them how to become fully human again.

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## Acknowledgements

This thesis has been a work of collaboration, and I am profoundly grateful for everyone who added their time and talent along the way.

None of this would be possible without the phenomenal support of Professors Greg Jones and Dan Ariely. Greg: even though we are physically miles apart, you were so responsive and helpful at every step it felt like I never left Duke. Dan: you responded to an email from an unknown Divinity student, made time to meet with me in Durham and Portland, and pushed my thinking and abilities. During this process I have been grateful to call myself irrationally yours.

To my beautiful and brilliant Melissa Evers-Hood: you listened deeply, offered insightful criticism, only laughed a little at my first attempt to graph in Excel, and created the tool that made the human subject research possible.

To Jean and John Martin, aka Kirk and Spock: your eagle-eyed editing improved the readability of the work and pushed me when my thinking needed to be more clear. And no calendars on the walls this time!

To Dr. Courtney Stevens: your superb analytic mind and incredible kindness saved me from the jaws of statistical defeat. You steered me away from bad directions and opened up possibilities I would never have considered. I am in your debt.

To all of the pastors and elders who said ‘yes’ to allowing this crazy pastor into their sessions to play games with them. You were all busy, had no idea what you were getting into, and yet you risked welcoming me into your midst. I enjoyed every minute of my time with you and am still learning from this experience.

# 1. The Behavioral Turn

One of the current thought leaders in behavioral economics and behavioral game theory, Colin Camerer, defines behavioral economics simply as increasing “the explanatory power of economics by providing it with more realistic psychological foundations.”<sup>1</sup> This definition is important as much as for what it does not say as for what it does. While popularly understood to be, at the Brobdingnagian end of the spectrum, a revolution upending all of classical economic theory as we know it or, at the Lilliputian end, merely a sub-disciplinary side show, Camerer frames behavioral economics as modestly, but powerfully, aiding the discipline of economics in doing better what it was already doing. In other words behavioral economics, in Camerer’s view, is not an entirely new field but rather a way of restoring to economics ways of thinking and understanding that became lost over time. When one applies the insights of behavioral theory to theology and practical ministry, the importance of this conservative, institutional way of understanding the behavioral turn cannot be overstated. Just as behavioral economics represents more of a restoration than a revolution in economic theory, the behavioral theological turn merely improves the church’s ability to faithfully discern and plan together by providing a more realistic Christology and theological anthropology. The behavioral turn will not save theology or

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<sup>1</sup> Colin Camerer, George Loewenstein, and Matthew Rabin, eds., *Advances in Behavioral Economics: The Roundtable Series in Behavioral Economics* (Princeton: University Press, 2003), 417-418, Kindle.

the church anymore than any human endeavor might as the triune God was, is, and ever shall be the foundation and salvation of the church.

The history of the behavioral turn in economics is complicated. While behavioral economics combines economic theory with psychological insight, it is important to note that economics initially started out combining economics and psychology. While Adam Smith is better known for the invisible hand from his *Wealth of Nations*, Smith also wrote *The Theory of Moral Sentiments* in which he articulated psychological motivations for human behavior that some argue are as profound as his economic theory.<sup>2</sup> Pioneering economists like Jeremy Bentham, the founder of modern utilitarianism, developed his notion of utility from the psychological concept of affect.<sup>3</sup> Others point out the immense importance John Maynard Keynes placed upon psychology citing his generous use of terms such as psychological laws, psychological effect, the psychology of the community, and other similar phrases.<sup>4</sup> Yet, while economists may have started out combining economic theory with psychological wisdom, this easy relationship did not last.

Eager to place economics on a more solid footing, economists after the turn of the twentieth century were hopeful to create in economics a more positivist, rigorous, and

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<sup>2</sup> Nava Ashraf, Colin Camerer, and George Lowenstein, "Adam Smith, Behavioral Economist," *Journal of Economic Perspectives* 19, no. 3 (Summer 2005): 132.

<sup>3</sup> Paul Slovic et al., "Rational actors or rational fools: implications of the affect heuristic for behavioral economics," *Journal of Socio-Economics* 31 (2002): 331.

<sup>4</sup> Wesley Pech and Marcelo Milan, "Behavioral economics and the economics of Keynes," *The Journal of Socio-Economics* 38 (2009): 893.

scientific discipline.<sup>5</sup> This scientific positivism assumed human beings to be rational, meaning they are capable of accurately assessing probability between alternatives, ranking these alternatives in order of expected payoff value, and a consistency in choosing the most likely alternatives that maximize self-interest.<sup>6</sup> Further, mainstream economics “deduces principles of economic behavior from features of human nature assumed to be valid at all times and in all cultures.”<sup>7</sup> The wholly rational *homo economicus* assumed by mainstream economists in much of the twentieth century is something akin to the imaginary frictionless planes and air-free landscapes students are asked to visualize when learning elementary Newtonian mechanics. While such abstract perfection helps students learn the basics, the problem, according to behavioral economists, is that students forget how different the real world might actually be.

While the full flower of the behavioral economics movement does not come into bloom until the 1980s, many significant breaks from the mainstream occur as early as the 1950s with figures such as George Katona, credited with coining the term ‘behavioral economics’, and Nobel laureate Herbert Simon.<sup>8</sup> Teaching at the University of Michigan, Katona was uneasy with the lack of empiricism present in economic departments. Katona’s empirical survey work for the Federal Reserve in the 1940s gave revolutionary

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<sup>5</sup> John F. Tomer, “What is Behavioral Economics?” *The Journal of Socio-Economics* 36 (2007): 467.

<sup>6</sup> Herbert Simon, “A Behavioral Model of Rational Choice,” *The Quarterly Journal of Economics* 69, no. 1 (1955): 100.

<sup>7</sup> B. Yang and D. Lester, “New Directions for Economics,” *Journal of Socio-Economics* 24 (1995): 436.

<sup>8</sup> Hamid Hosseini, “The arrival of behavioral economics: from Michigan, or the Carnegie School in the 1950s and 1960s?” *The Journal of Socio-Economics* 32 (2003): 393.

new insight into the importance of consumer behavior.<sup>9</sup> Prior to Katona's work, economists relied on models alone, believing that the human element did not need to be factored into the equation. Thanks to Katona actually studying how real humans behaved, the standard models became far more helpful. This intellectual strategy of testing an economic model to see if live humans behave the way they are predicted to behave became a staple after the behavioral turn. Not surprisingly, real human beings did not behave entirely as the models predicted.

Concurrent with George Katona's work, Nobel laureate Herbert Simon also pushed the boundaries of the classical economic model. As early as 1947 Simon began to publish serious doubts concerning the perfect rationality the classical model takes for granted.<sup>10</sup> Noting that actual human beings never have enough information and time to make perfectly rational decisions to maximize their utility, Simon proposed instead a neologism: 'satisficing'.<sup>11</sup> Satisficing describes the actual human behavior of assessing available options, choosing from among them, and then learning to be satisfied with the outcome whether it was the best choice as defined by perfectly rational self-interest or not. This realism regarding observed human behavior led to Simon's greatest concept known as 'bounded rationality'. With bounded rationality Simon acknowledged that

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<sup>9</sup> Hamid Hosseini, "George Katona: a founding father of old behavioral economics," *The Journal of Socio-Economics* 40 (2011): 979.

<sup>10</sup> Hosseini, "The arrival of behavioral economics," 401.

<sup>11</sup> Herbert A. Simon, "Bounded Rationality and Organizational Learning," in *Organizational Learning: Papers in Honor of (and by) James G. March*, special issue *Organization Science* 2, no. 1, (1991): 125-134.

humans are rational but only within certain limits. While Simon focused mainly on the limits of knowledge, later psychologists expanded on this idea of bounded rationality to show that it is not merely what we do not know but what we *think* we know that can be problematic.

While credit must be given to Katona and Simon for their groundbreaking work, it would take the unusually close teamwork of psychologists Amos Tversky and Daniel Kahneman to bring about widespread change in how economists thought about people. Benefitting from the significant developments in the fields of cognitive psychology in the 1960s, Tversky and Kahneman developed a sophisticated model for understanding Simon's bounded rationality. To be described in more detail in a following section, Tversky and Kahneman show again and again how the brain relies on dual processes for understanding and relating to the world. While most of the time these dual processes function smoothly and give us an adequate sense of the world, all too often short cuts, known as heuristics, produce predictable biases. Through a series of phenomenally clever experiments Tversky and Kahneman trained their sights on the economic world by testing some of the predictions economists made about how people should behave. In a 1974 paper this duo laid out their theory for how heuristics can cause problems for people making predictions about how probable certain events are, and in 1979 Tversky and Kahneman published a paper applying their theory to experimental data showing that people do not behave according to fundamental economic prediction. This 1979



paper on 'prospect theory' became one of the most widely cited articles ever published by *Econometrica*, a mainstream economics journal.<sup>12</sup>

The research of Katona and Simon provided economists with a sense that people did not always behave the way models predicted they should. With Tversky and Kahneman economists now had a theory that could predict this 'irrational' behavior. After these insights behavioral economics began to take off. In 1986 the Society for the Advancement of Behavioral Economics met at the University of Chicago, the first conference to promote behavioral economics. In 1994 David Laibson became the first person granted an economics Ph.D. with a behavioral focus and then hired by a major university, Harvard University. This event caused such a stir the economics reporter for the New York Times reported that in 1994 behavioral economics had "finally arrived."<sup>13</sup> In 1997 behavioral economics became so mainstream the conservative Quarterly Journal of Economics published a special issue devoted entirely to the new perspective.<sup>14</sup> Today, while detractors still exist, nearly every student graduating from a major school of business will have at least some exposure to the ideas of behavioral economics. In a very short time this interdisciplinary tree has borne a surprising amount of fruit.

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<sup>12</sup> Camerer, Lowenstein, and Rabin, *Advances in Behavioral Economics*, Kindle locations 498-499.

<sup>13</sup> Louis Uchitelle, "Following the Money but Also the Mind," *New York Times*, February 11, 2001, accessed January 8, 2014, <http://www.nytimes.com/2001/02/11/business/following-the-money-but-also-the-mind.html>.

<sup>14</sup> Camerer, Lowenstein, and Rabin, *Advances in Behavioral Economics*, Kindle locations 501-502.

## 2. Understanding Behavioral Theory

One of the core principles of behavioral theory is that human beings are, to some degree, strangers to themselves. The 'I' of which one is aware, the 'I' that thinks and reflects and makes decisions: this 'I' does not tell the whole story according to behavioral theory. While scholars diverge over various aspects of this theory, I will adopt the dual cognitive model developed first by Keith Stanovich and Richard West and later honed by Amos Tversky and Daniel Kahneman given this model's degree of influence.<sup>1</sup>

Kahneman describes the brain as being like two characters: humans have a reactive automatic self of which they remain almost entirely unaware; and humans have a more reflective self of which they are conscious. Stanovich and West referred to these dual functions as System 1 and System 2. Counter to common perception, the system responsible for nearly all decision making is not the system of which humans are most conscious. A great majority of decision making occurs at the level of System 1, the automatic system. Only perceptions and decisions that confound System 1 get pushed up to the level of consciousness and then must be handled by System 2. This dual processing system allows humans to function in an incredibly complicated environment. System 1 constantly assesses the surrounding world for threats and opportunities, all the while leaving System 2 free to think.

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<sup>1</sup> Keith E. Stanovich and Richard F. West, "Individual Differences in Reasoning: Implications for the Rationality Debate," *Behavioral and Brain Sciences* 23 (2000): 645–65.

To understand System 1 Kahneman gives the example of driving a car on a crowded highway at a high rate of speed while having a conversation with a passenger. On the one hand the brain is processing an enormous amount of data: keeping track of where the car is in the lane, watching where other vehicles are in relation, and a million other details all in constant flux. Yet, while System 1 is seamlessly keeping tabs on the world rushing by, the reflective System 2 is able to hold a conversation with the person sitting in the passenger seat. In contrast imagine a situation in which a person is asked to perform a simple multiplication question in their head. Due to training most people are able to answer simple multiplication in their heads without really giving it much effort. But if challenged to factor  $24 \times 43$  without the use of paper, immediately most individuals will feel the need to close their eyes, cease their conversations, and focus entirely on the problem at hand.<sup>2</sup> The automatic System 1 is not up to this task and immediately sends it to System 2 for a solution.

The wondrous thing about this cognitive arrangement is how efficient it is most of the time. Much of the time this arrangement works well, and most human beings are able to allocate perception and decision making to System 1 and allow System 2 to think about whatever is on the mind without too much difficulty. Unfortunately, the downside to this arrangement is that while System 1 is able to process an enormous amount of information, the way it processes is to trade quality for quantity. Through

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<sup>2</sup> Daniel Kahneman, *Thinking, Fast and Slow* (New York: Farrar, Straus, and Giroux, 2011), 23, Kindle.

experiment after experiment Tversky and Kahneman and others have shown that human automatic systems rely on what they call heuristics in order to process enormous amounts of data quickly. A heuristic is a simple rule employed by the brain to render a judgment regarding a perception.<sup>3</sup> These simple rules, or patterns, allow the brain to work quickly, but these heuristics often lead to predictable errors, referred to as cognitive biases. Behavioral theorists have identified several key heuristics and related biases.

The availability heuristic refers to the way the brain makes a judgment about how likely it is a certain event will take place.<sup>4</sup> Availability refers to the ease with which the brain can bring an event to mind. The more often an individual has heard of an event occurring or the more emotionally charged the event, the more likely it is the brain will think of an event regardless of the actual numerical rates of incidence. On a recent family vacation a guide asked members of our group whether anyone was afraid of sharks. Only a few honest people raised their hands, and they were commended for being forthright. Then, the guide asked the group who was afraid of coconuts. Smiles were seen and laughter was heard. The guide proceeded to tell the group that rational people should be far more concerned about coconuts than sharks because falling

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<sup>3</sup> Thomas Gilovich, Dale Griffin, and Daniel Kahneman, *Heuristics and Biases: The Psychology of Intuitive Judgment* (New York: Cambridge Press, 2002), Kindle locations 145-146, Kindle.

<sup>4</sup> Kahneman, *Thinking, Fast and Slow*, 129.

coconuts kill several times the annual rate of people compared to sharks.<sup>5</sup> Yet, storing this information in System 2 will not help when an individual snorkeling along a reef encounters a black tip shark for the first time. System 1, working through an availability heuristic, will instinctively recall newspaper stories, movies, or a certain John William's score and feel a surge of adrenaline that a coconut will simply never produce. The significance of this heuristic transcends snorkeling. Even people who agree intellectually that climate change poses a serious threat will never feel an equivalent visceral sense of fear. The availability heuristic makes it easy for people to believe intellectually a situation is threatening, but without the physical sensation of fear they may easily fail to act due to a lack of internal prompting.

One of the most baffling heuristics is the anchoring and adjustment heuristic, commonly referred to just as anchoring.<sup>6</sup> When asked to estimate an unknown number, System 1 uses an 'anchor and adjust' method.<sup>7</sup> The anchor refers to the most available known number that seems plausible to the brain. Then, comparing the unknown number the brain will adjust the guess up or down relative to the anchor. Individuals consciously apply this strategy constantly when determining the timeline of an event. Individuals often use the available anchor of a well-known date (i.e., many people remember exactly where they were when John F. Kennedy was assassinated or when

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<sup>5</sup> Peter Barss, "Injuries Due to Falling Coconuts," *The Journal of Trauma* 24, no. 11 (1984): 990-1.

<sup>6</sup> Dan Ariely, *Predictably Irrational, Revised and Expanded Edition: The Hidden Forces That Shape Our Decisions* (San Francisco: Harper Collins, 2010), 27, Kindle.

<sup>7</sup> Kahneman, *Thinking, Fast and Slow*, 120.

9/11 occurred) and then will place the unknown event in relation to that known anchor. The great challenge of the anchoring heuristic is the power the anchor has over human estimates. When prompted, 'primed' is the technical term, with a low or high number, experiments demonstrate that estimates will rise or decline in relation to this prime. In one of the most absurd examples students were asked to write down the last two digits of their social security numbers on a piece of paper. Then, the students participated in an auction. The students who wrote down higher social security numbers valued items significantly higher than did students with lower numbers.<sup>8</sup> The baffling aspect of this experiment is that when asked if writing down their social security number affected their estimates, participants were adamant that it did not. System 2 simply is not always aware of the decisions System 1 is making.

The representativeness heuristic is similar to the availability heuristic in that this heuristic aims to help an individual make a judgment regarding probability. With the representative heuristic System 1 divides the world into categories and then makes decisions regarding how well an individual or event fits into that category. Kahneman provides a theoretical example of how likely it is a well-dressed stranger on a subway reading the New York Times holds a Ph.D. System 1 views either/or questions as being equally likely. Therefore, all the brain can do is compare the person on the train with preset categories to decide how likely it is that this stranger does or does not fit into the

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<sup>8</sup> Ariely, *Predictably Irrational*, 30-31.

Ph.D. category. Given that the attire and the fact that the person is reading the New York Times is consistent with the Ph.D. category, most people will overestimate how likely it is that the person holds a Ph.D.<sup>9</sup> As with all heuristics, Kahneman cautions the wise person not to trust their gut and rely on System 1 to make a probability judgment in cases like this example.

The list of cognitive biases and effects stemming from these and other heuristics is voluminous. The most important biases and effects, however, bear discussion. Loss aversion represents one of the most powerful and prevalent cognitive biases. Loss aversion, simply put, refers to the pain humans feel regarding losing something relative to the positive feelings they experience gaining it.<sup>10</sup> Through experimentation theorists demonstrate that the pain of losing something is double the experience of gaining the same thing.<sup>11</sup> Given that a perfectly rational person should value equivalent gain and loss as being equal, loss aversion accounts for why people hold on to underperforming investments or why people stay in bad relationships in which they have invested time. Anecdotally, every pastor knows by experience how much easier it is to start something new at a congregation than it is to shut a program down. Even congregations reluctant

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<sup>9</sup> Kahneman, *Thinking, Fast and Slow*, 151.

<sup>10</sup> Dan Ariely, *The Upside of Irrationality: The Unexpected Benefits of Defying Logic at Work and at Home* (San Francisco: Harper Collins, 2010), Kindle locations 423-424, Kindle.

<sup>11</sup> Daniel Kahneman, Jack L. Knetsch, and Richard H. Thaler, "Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias," *The Journal of Economic Perspectives* 5, no. 1 (Winter, 1991), 200.

to change prefer starting a new ministry to ending a cherished tradition even if few seem to still care about it.

Status quo bias describes the human tendency to accept default settings. Status quo bias can create massive challenges involving choices like organ donation and retirement savings. The United Kingdom and the Netherlands have an organ donation rate of only 17.7% and 27.5% respectively, while Belgium and France boast a rate of 98% and 99.91%. While many will speculate regarding cultural or religious explanations, the answer is that countries with low organ donation rates like Germany, Denmark, the United Kingdom, and the Netherlands require drivers to opt in to organ donation at the Department of Motor Vehicles.<sup>12</sup> The default choice is non-donation. However, in the countries where the DMV default is set to donation, countries see nearly 100% rates of participation. Status quo bias is quite literally a matter of life and death in countries requiring individuals to opt in to organ donation. Cass Sunstein and Richard Thaler lamented a similar problem at the University of Chicago where they teach. Every year in November employees experienced an open enrollment season when they made decisions about health insurance and retirement. Every year the default setting went back to zero. If an employee had been participating in the 401K plan, every November their choice reverted to non-participation; they had to consciously choose to opt in each year. The effects were predictably abysmal. Many busy professionals assumed they were

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<sup>12</sup> Eric J. Johnson and Daniel G. Goldstein, "Do Defaults Save Lives?" *Science* 302 (2003), 1338.



saving for their future when in fact they were not. Thanks to Sunstein and Thaler, who presented this information to the administrative officers of the University of Chicago, the institution has now changed its policy. Every November rather than resetting to zero, the choice the employee made in the previous year is now the default setting for the next plan year. The employees are always free to opt out, but now it is non-participation that requires an active choice.

Framing effects refer to the fact that how the way a choice is put to an individual can significantly impact what an individual chooses. Amos Tversky and Daniel Kahneman tested the framing effect asking two groups to make a choice regarding a hypothetical medical procedure. The information they used with both groups was numerically equivalent, but they framed the question for the first group using a 'survival' frame, and they framed the question for the second group using a 'mortality' frame. Both groups must choose between surgery and radiation. The first group is told that of 100 people having surgery 90 live through the post operative period, 68 are alive at the end of the first year, and 34 are alive at the end of five years. Of 100 people having radiation therapy all live through the treatment, 77 are alive at the end of one year, and 22 are alive at the end of five years. In the mortality frame group the numerical information is exactly the same, however Tversky and Kahneman invert the numbers to describe how many patients died. So, out of 100 patients having surgery, 10 died in the post-operative period, 32 are dead at the end of the first year, and 66 are dead after five

years. The numbers are equally reversed for the radiation choice in the mortality frame. The data shared is exactly the same. Yet, focusing on the number of those who lived versus those who died makes an enormous difference to those choosing between the two options with the mortality frame making people far more risk averse.<sup>13</sup>

Confirmation bias is the habit of noticing information that affirms the beliefs people already hold and discounts information that challenges them. In *Decisive* Chip and Dan Heath cite a study of smokers done back in the 1960s. Smokers were far more likely to express interest in reading stories in the newspaper titled “Smoking Does Not Lead to Lung Cancer” than they were stories titled “Smoking Leads to Lung Cancer.”<sup>14</sup> Confirmation bias suggests that individuals are interested in the opinions of others just as long as the positions support what they already think. Thanks to cable news, the Internet, and confirmation bias, it is easier than ever for individuals to surround themselves with multiple voices offering the same opinion giving people the mere illusion of being well informed. Confirmation bias poses a unique challenge to leaders. One survey confirms that leaders, especially successful leaders, are more likely to suffer from confirmation bias. Matthew Heyward and Donald Hambrick conducted a study on CEOs leading companies through times of acquisition.<sup>15</sup> Disturbed by the fact that so

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<sup>13</sup> Amos Tversky and Daniel Kahneman, “Rational Choice and the Framing of Decisions,” *The Journal of Business* 59, no. 4, part 2: The Behavioral Foundations of Economic Theory (1986), S254.

<sup>14</sup> Chip Heath and Dan Heath, *Decisive: How to Make Better Choices in Life and Work* (New York: Crown Publishing, 2013), Kindle locations 185-187, Kindle.

<sup>15</sup> Heath and Heath, *Decisive*, Kindle locations 1440-1441.

many CEOs make eye-poppingly expensive deals that fail to produce value, Heyward and Hambrick suspected that hubris and confirmation bias might be partly to blame. They surveyed over one hundred large acquisitions to see whether the success of the acquisition was conditioned by the potential for confirmation bias in the CEO. They looked for CEOs who were praised by the media, could boast of recent high corporate performance, and those who were paid significantly more highly in comparison to the people who worked under them. Heyward and Hambrick figured that CEOs who scored high in these categories would have ample reason to think highly of themselves, thus falling even more prey than normal to confirmation bias. And, indeed, they were correct. The more highly CEOs were likely to think of themselves, the more they were willing to make a bad deal, presumably thinking they were seeing something no one else could.

Priming effects, as noted under the anchoring heuristic above, offer some of the most striking examples of the disconnect that can occur between System 1 and System 2 thinking. In priming studies subjects are studied to see what influence, if any, the mere presence of a number, image, or phrase can have. As in the previous example of students primed with the last two numbers of their social security number, the effects of priming can be disturbing for individuals who cherish ideas about self-control and autonomy. Priming effects demonstrate just how suggestible human beings can be. In one particularly fascinating study students were asked to walk down a hallway.

Students who were primed with words that suggested old age walked measurably slower down the hall than students who were primed with other words. Termed the 'ideomotor' effect, priming not only influenced how these students thought but also how they physically moved.

Ironically, despite all of the evidence of human limitation another pervasive bias is the optimism bias, describing the pervasive tendency towards exceptionalism: *others* might be biased, but *we* are not. Sunstein and Thaler humorously remark that when it comes to judging one's own performance, we are all from Lake Wobegon: we see ourselves as all above average.<sup>16</sup> In one study 90% of drivers believed they were above average in their driving abilities, and in another study at a large college 94% of professors believed they were above average teachers, stretching the meaning of average far beyond the breaking point.<sup>17</sup> The optimism bias carries an important message to decision makers in two ways. First, the optimism bias stands as a warning to decision makers not to trust in their optimistic feelings regarding plans and decisions. Decision makers should know that their gut will often feel positively about a plan or decision even when there is no good reason for this sense of well-being. In his famous study that will be discussed more fully in a later section Philip Tetlock found that when experts expressed 100% confidence in an opinion, they turned out to be wrong 23% of the time.

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<sup>16</sup> Cass R. Sunstein and Richard H. Thaler, *Nudge: Improving Decisions About Health, Wealth, and Happiness*, (New Haven: Yale University Press, 2008), 32, Kindle.

<sup>17</sup> Sunstein and Thaler, *Nudge*, 32.

It is one thing to be wrong when you do not feel certain about an answer, but to feel absolutely certain you are right and still be wrong nearly one out of four times is humbling indeed.

There is another side to the optimism bias that has to do with messaging. Leaders are not the only people affected by the optimism bias. The people being led by decision makers also believe their judgment is above average. Leaders who fail to exercise caution when challenging the optimism bias will suffer the consequences. Jimmy Carter's 1979 address to the American people, popularly referred to as the malaise speech, offers leaders a grim warning in this regard. On a more positive note leaders who frame messaging in light of the optimism bias will communicate their ideas with great effectiveness. Robert Cialdini led a study in the National Petrified Forest to determine the most effective signage for reducing the incidence of people removing petrified wood from the park.<sup>18</sup> The study compared the effectiveness of signs that emphasized a negative message versus a positive one. Negative signs expressed how poor behavior had deleterious effects on the park; positive signs emphasized how individual compliance made a difference. Cialdini theorized that the positive messaging would be more effective, and his hypothesis proved correct. Church leaders should think twice before attempting to shame congregations into action through negative messaging; it is likely that they may achieve exactly the opposite of what they intend.

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<sup>18</sup> Sunstein and Thaler, *Nudge*, 67.

In what might be termed an affect bias, intense emotional states themselves have an enormous impact on human cognition. While this may seem like common sense, what is fascinating is how little understanding individuals have of their motives and likely decision making from one emotional state to another. In what scholars refer to as an empathy gap, participants in experiments designed to create emotionally cold and hot environments, environments privileging System 2 and System 1 respectively, participants made different decisions in these two states. Not only did subjects make different decisions in these emotional states, but also when surveyed afterwards participants in one state showed little comprehension of the decisions they made in the other. In a study with phenomenal value for public health Dan Ariely asked young men a series of questions regarding sexual decision making: questions such as condom use and whether participants would consider having sex with someone they do not know well. The men answered these questions first in a cold state, and then they were asked to masturbate while looking at sexualized images and answer the questions again.<sup>19</sup> Not surprisingly the men were far less risk averse in the hot state. What was significant about the study, though, was the response of the participants in a cold state when they viewed their responses recorded in a hot state. Many of the men expressed surprise, and some even denied that they could have answered some of the questions in the way they

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<sup>19</sup> Ariely, *Predictably Irrational*, 121.

did. It was as if the men in one state simply could not understand the person they became in another.<sup>20</sup>

Similar to the way in which changing emotional states sway perception and judgment, Dan Ariely studies the way in which different states of perceived relatedness change how people interact. Referring to these states as social and market norms, Ariely describes the difference using a thought experiment he does not personally recommend. Ariely asks one to imagine attending a Thanksgiving feast lovingly prepared by one's mother-in-law: "The festivities continue into the late afternoon. You loosen your belt and sip a glass of wine. Gazing fondly across the table at your mother-in-law, you rise to your feet and pull out your wallet. 'Mom, for all the love you've put into this, how much do I owe you?' you say sincerely. As silence descends on the gathering, you wave a handful of bills. 'Do you think three hundred dollars will do it? No, wait, I should give you four hundred!' This is not a picture that Norman Rockwell would have painted. A glass of wine falls over; your mother-in-law stands up red-faced; your sister-in-law shoots you an angry look; and your niece bursts into tears. Next year's Thanksgiving celebration, it seems, may be a frozen dinner in front of the television set."<sup>21</sup> In the social norm people give and receive favors without asking for any kind of immediate payment in a fluid system of reciprocity. In a market norm, on the other hand, goods and services

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<sup>20</sup> Ariely, *Predictably Irrational*, 127.

<sup>21</sup> Ariely, *Predictably Irrational*, 75-76.

are offered in exchange for payment. In contrast to the social norm, little is fluid in a market norm. Economic utility demands that services rendered merit fair payment; not a penny more, but not a penny less, either. These different social and market contexts change how humans act and what they are willing to do for one another.

Ariely and others have found volunteers in laboratory conditions who are asked to perform simple tasks work harder and are more willing to help others than those who perceive themselves to be paid. Real world examples of this phenomenon abound as well. Ariely cites the counterintuitive experience of the AARP in their attempt to attain legal help for their membership. At first leaders in the AARP asked lawyers to offer a low rate of thirty dollars per hour to needy retirees. Finding very few lawyers willing to do this, the AARP changed tactics and asked lawyers to offer their services for free. When asked to work pro bono the lawyers overwhelmingly obliged.<sup>22</sup> Although many think one gets what one pays for, different social and market norms demonstrate that this premise is often far from the case. Given the complicated ways in which the church mixes social and market economies with a mix of paid and volunteer staff, ecclesial leaders need to pay especially close attention to how the market or social norm established will nudge congregational behavior.

Behavioralists also study the way changes in context affect perception itself. The value attribution bias describes the way humans value people and objects differently

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<sup>22</sup> Ariely, *Predictably Irrational*, 79.



when they are presented in different settings. Ori and Rom Brafman describe a vivid demonstration of value attribution that took place in 2007. In the L'Enfant Plaza subway station in Washington, DC commuters streamed past a man dressed in jeans and a T-shirt playing the violin. The man playing the violin was Joshua Bell, one of the most well known and in-demand living violinists. Yet, this hoard of commuters walked past Bell's impromptu concert of Bach sonatas and partitas without so much as noticing. Of the 1,097 people who walked by only one man stopped to listen for a few moments, two kids gawked, and one woman who recognized the famous violinist was thrilled. The reason so many walked past this man they would otherwise gladly pay money to hear play? The context in which Bell was playing and the way he was dressed did not signal the people walking by that they should attribute value. Value attribution suggests that presentation plays a far more significant role than performance does, in spite of how humans tell their children never to judge a book by its cover.<sup>23</sup>

Closely tied to value attribution is inattentional blindness, the name given the phenomenon describing what happens when average people fail to perceive what is obvious due to its unexpected nature.<sup>24</sup> Such events include mundane appearances of pedestrians and motorcycles to the absurd invisible gorilla made famous by Christopher Chabris and Daniel Simons. Chabris and Simons asked subjects to watch a video of

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<sup>23</sup> Ori Brafman and Rom Brafman, *Sway: The Irresistible Pull of Irrational Behavior* (New York: Broadway Books, 2008), 49-50.

<sup>24</sup> Christopher Chabris and Daniel Simons, *The Invisible Gorilla: And Other Ways Our Intuitions Deceive Us* (New York: Crown Publishing, 2010), 6, Kindle.

basketball players dressed in white and black passing a ball back and forth counting the number of passes made by the white team. In the middle of a video a person wearing a gorilla suit enters the picture, beats its chest, and leaves the screen. At the conclusion of the video participants record the number of passes made by the white team and then are asked whether they saw a gorilla. In this study as well as in repeated studies only around 50% of participants report seeing the gorilla.<sup>25</sup> Even more remarkably, Chabris and Simons collaborated on what Chabris and Simons call the door study in which an experimenter pretends to ask a stranger for directions. Then, confederates interrupt the conversation carrying a large door hiding a third confederate. As the door passes, the third confederate replaces the original experimenter who was asking for directions. Again, roughly 50% of people carry on giving directions with this new face oblivious to the fact that they are now speaking to an entirely different person.<sup>26</sup> Chabris and Simons note we are not only prone to inattentional blindness but ‘change blind’ as well and conclude that when engaged in one activity average people simply are not able to adequately perform other tasks. Further, when people are not expecting to see something they often do not, even when it is right in front of their eyes.

Many more biases exist, but these examples are enough to provide a picture of human beings that radically complicates the understanding of rationality, will, and the

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<sup>25</sup> Chabris and Simons, *The Invisible Gorilla*, 6.

<sup>26</sup> Chabris and Simons, *The Invisible Gorilla*, 59-60.

self. Whereas humans, seemingly by default, identify the self with reflective System 2 thinking, the findings of behavioral theory suggest that System 1 is far more involved in our decision-making processes from moment to moment. Psychologist Jonathan Haidt strikingly refers to how human beings are like tiny riders on enormous elephants.<sup>27</sup> The rational System 2 part of the human brain represents the tiny riders sitting astride the enormous, reactive System 1 elephants. While Haidt and others do not go so far as to say that the conscious, reflective human selves are entirely unable to influence the direction in which their elephants travel, Haidt argues that much of the time human reflective selves act like presidential press secretaries, fashioning after the fact reasons for why elephantine emotional selves feel and move the way they do.

The implications of this work for the practice of theology and ministry are vast with potential ramifications for Christology, theological anthropology, soteriology, and hamartiology in particular. Since Christians claim Christ as fully God and fully human, how does this behavioral understanding of humanity impact the understanding of Christ? What do these findings mean for understanding theological anthropology, how humans relate to God? Given the importance of volition in terms of some understandings of salvation and sin, what does it mean to make a choice for Christ or to sin in light of this sustained assault against what is commonly referred to as free will?

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<sup>27</sup> Jonathan Haidt, *The Righteous Mind: Why Good People Are Divided by Politics and Religion* (New York: Random House, 2012), Kindle locations 943-945, Kindle.

Moreover, what should theology and the practice of ministry look like as a result? Do current methods emphasizing reason, academics or pastors laboring over a text alone in their studies, provide an adequate safeguard against the predictable irrationality stemming from cognitive biases, particularly the confirmation bias?

### 3. The Chalcedonian Christ with a Rational Soul

When it comes to understanding human beings, Karl Barth's words continue to ring true: "The nature of the man Jesus alone is the key to the problem of human nature."<sup>1</sup> As significant as the findings of cognitive psychology and behavioral economics are, Jesus Christ is the appropriate starting place for Christian theology. If the findings of behavioral theory fail to relate to Jesus Christ in a meaningful way or, worse yet, contradict the person Christians know through Scripture by the power of the Holy Spirit, then these findings might be interesting to the church but would constitute at best a distraction. The question that has to be answered before moving toward any kind of behavioral theology is the question Jesus asked his disciples then and now: "Who do you say that I am?" (Mark 8:29 NRSV).

The ecumenical council of Chalcedon provides the most helpful framework for understanding the person of Jesus Christ. While the question of the Son's relationship to the Father was at least politically settled at Nicaea with the church accepting the Son being *homoousious*, consubstantial, with the Father, the question of the relationship between Christ's humanity and divinity remained in dispute. The Chalcedonian formula that emerges succeeds by outlining a Holy mystery. At Chalcedon the church declares Christ to be both fully divine and fully human. In one person, being consubstantial with

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<sup>1</sup> Karl Barth, *Church Dogmatics Vol. III: The Doctrine of Creation, Part 2*, trans. H. Knight, G.W. Bromiley, J.K.S. Reid, and R.H. Fuller, eds. G.W. Bromiley and T.F. Torrance (Peabody, MA: Hendrickson Publishers, 2010), 136.

the Father, Christ's humanity and his divinity are separate yet inseparable; they are joined but not confused.<sup>2</sup> Athanasius emphasizes this mysterious union of divinity and humanity: "Thus, even while present in a human body and himself quickening it, he was, without inconsistency, quickening the universe as well, and was in every process of nature."<sup>3</sup> Athanasius particularly lifts up how while in his divinity Christ is unfettered, Christ's humanity is real and embodied in every way: "Accordingly, when inspired writers on this matter speak of him as eating and being born ... because the actual body which ate, was born, and suffered, belonged to none other but to the Lord: and because, having become man, it was proper for these things to be predicated of him as man, to show him to have a body in truth, and not in seeming."<sup>4</sup>

The Chalcedonian formula and Athanasius go to great lengths to show how in the person of Jesus Christ God can take true, human flesh and remain true God. Yet the emphasis of the council is *that* Jesus Christ is both human and divine. The council is less helpful, however, when it comes to the question of the nature of Christ's humanity itself. When the council claims Jesus to be fully human, what exactly do they mean? One concern, the issue of Jesus' rationality, raises a particularly significant question in light of what behaviorists posit about the limits of human reason. The council, in concurrence with the earlier Nicene Creed, describes Christ as having a 'rational soul', a

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<sup>2</sup> Richard Norris, *The Christological Controversy* (Philadelphia: Fortress Press, 1980), 31.

<sup>3</sup> Edward R. Hardy, ed., *Christology of the Later Fathers* (Philadelphia: Westminster Press, 1954), 71.

<sup>4</sup> Hardy, *Christology of the Later Fathers*, 72.

ψύχες λογικές and a body.<sup>5</sup> What exactly does it mean to be rational, and what does it mean to say that Christ has a rational soul? These are crucial questions upon which the usefulness of behavioral theory in a Christian context hangs.

Divergent views swirl over how best to define rationality. While it would not be appropriate in this thesis to devote time to an exhaustive treatment of the many and varied understandings of rationality, three competing notions of rationality in addition to the concept of bounded rationality discussed earlier demand a hearing: the instrumental rationality underpinning the standard economic model, the nuanced Christological ‘superrationality’ of Sarah Coakley, and the two-sided ‘predictable irrationality’ creatively researched by Dan Ariely. While at first these three views appear mutually exclusive, what will become apparent is a strong disconnect between the instrumental view of rationality and the latter two. Further, while Coakley and Ariely’s views upon first blush seem to entirely contrast with Coakley defending a wider view of rationality and Ariely reveling in human predictable irrationality, I will show a consonance between their arguments not immediately obvious.

In the previous discussion concerning the behavioral turn attention was given to Herbert Simon’s critique of the assumptions economists were making regarding human ability to intuitively understand how to maximize utility given limited knowledge and finite time and energy. At this point, it is worth being clearer about the view of

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<sup>5</sup> Hardy, *Christology of the Later Fathers*, 373.

rationality Simon's satisficing and bounded rationality challenged. The view of rationality prevalent in Simon's day and very much still operative forms the economic standard model. This model rests on three foundations: humanity should be understood individually; rational individuals are self-interested; and rational individuals always make choices that maximize their utility.<sup>6</sup> The power of instrumental rationality must certainly be respected. Free markets driven by individuals pursuing individual economic interests have, in many instances, created conditions in which jobs paying a living wage are plentiful and families have access to much needed goods and services. It is not hyperbole to celebrate the fact that the Berlin wall crumbled not because of shots being fired but because free Western markets proved more robust than those in the centrally planned East.

Lamentably, however, the strengths of a free market driven by instrumental rationalism also carry such severe defects that many question whether the bad does not outweigh the good. Any visit to a thriving city in the United States demonstrates not only the excesses of wealth lavished on the few but also a crushing poverty visited upon the many. Too often the rags to riches story instrumental rationalism promises of individuals being free to pursue their interests and thriving through hard work and education fails to match reality. In *Nickel and Dimed* journalist Barbara Ehrenreich writes:

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<sup>6</sup> Richard H. Thaler and Sendhil Mullainathan, "Behavioral Economics," *The Concise Encyclopedia of Economics*, in the Library of Economics and Liberty Online, ed. David R. Henderson (2008), accessed January 9, 2014, <http://www.econlib.org/library/Enc/BehavioralEconomics.html>.



“Something is wrong, very wrong, when a single person in good health, a person who in addition possesses a working car, can barely support herself by the sweat of her brow.”<sup>7</sup>

To one steeped in instrumental rationality, not only is it rational to strive for more even when one already has enough, but also striving for more is the only rational strategy.

Further, instrumental rationality fails even where it seems most likely to succeed.

Behavioral finance studies show how pure instrumental rationality not only fails to create the conditions for all to flourish through an invisible hand, but as seen in bubble after bubble and most clearly in the 2008 global financial collapse, the selfish and short-sighted behavior of the financial leaders who were supposed to be the most rational ruined many and threatened the global financial ecosystem. George Akerlof and Robert Shiller in *Animal Spirits* state: “Economic history is full of such cycles of confidence followed by withdrawal. Who has not taken a hike and come across a long-abandoned railway line—someone’s past dream of a path to riches and wealth? Who has not heard of the Great Tulip Bubble of the seventeenth-century Netherlands—a country famous, we might add, for its stalwart Rembrandt burghers and often caricatured as the home of the world’s most cautious people. Who does not know that even Isaac Newton—the father of modern physics and of the calculus—lost a fortune in the South Sea bubble of

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<sup>7</sup> Barbara Ehrenreich, *Nickel and Dimed: On (Not) Getting By in America* (New York: Henry Holt and Company, 2010), 199, Kindle.

the eighteenth century?"<sup>8</sup> And, when it comes to Jesus, the standard economic model provides no ground on which Jesus' life marked by kenotic, self-offering love makes any rational sense at all.

After the 2008 financial crisis the onus rests upon instrumental rationality to prove how instrumental it really is. Theologian Sarah Coakley mounts an impressive challenge to this narrow understanding of rational choice defined as self-interest and maximum utility not by questioning the practical value of the view, but by pushing on how rational in fact this view really is. Coakley challenges the instrumental rationality inherent in the positivist scientism of many evolutionary biologists and New Atheists who argue religious faith is by definition irrational. In particular Coakley vigorously attacks the Kantian fact/value distinction whereby science trades in facts and religion deals with irrational emotion offering mere interpretation; she further challenges the unspoken claim that rationality entails pure self-interest.

In *Faith, Rationality, and the Passions* Coakley compiles a series of articles probing the historic connections between reason and emotion. One of the key themes of all the articles is that the rigid distinction between reason and affect is recent, a product of nineteenth century scientism; thus, instrumental rationalism is also a recent concept. While the main thrust of the book is to recover a more accurate understanding of how

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<sup>8</sup> George A. Akerlof and Robert J. Shiller, *Animal Spirits: How Human Psychology Drives the Economy, and Why It Matters for Global Capitalism* (Princeton: Princeton University Press, 2010), 13, Kindle.

Enlightenment thinkers held complicated, nuanced understandings of reason and affect, historically the work touches on ancient views of reason as well. In particular Coakley showcases Cathryn Pickstock's brilliant reading of Plato's *Cratylus* demonstrating the room Plato allows for reason, passion, and embodiment to coexist. The thrust of Coakley's argument is that ancient thinking all the way through to the Enlightenment allowed for a view of reason that wedded reason, emotions, and embodiment. Only recently, she argues, have people begun to tear the affective realm from reason in a way that creates the possibility of a new atheist or a cold, calculating *homo economicus*.

In her brilliant 2012 Gifford Lectures *Sacrifice Regained: Evolution, Cooperation, and God*, Coakley explores what she refers to as a 'chastened natural theology' engaging with the game theoretic findings of her Harvard colleague Martin Nowak arguing that rationality makes room for sacrificial self-offering. I will address Nowak's work in greater detail later in this thesis, but for now what is significant about Nowak's work is his exploration of how self-giving cooperation features as a main engine driving evolution comparable with natural selection and mutation. In stark contrast to the still influential selfish gene theory of Sir Richard Dawkins, Nowak's work sheds light on sacrificial behavior in the animal and human world arguing generous acts are not only reasonable but constitute a fundamental aspect of biological nature. Coakley's engagement with philosophical historians and evolutionary game theorists leads her to understand Christ's ultimate kenotic outpouring of unselfish love as 'superrational'. By

this term Coakley means that Christ's sacrificial death is rational, consistent with Nowak's view and in absolute opposition to an instrumental view; but Christ's sacrificial death is 'super' in that his death was a once and for all act that requires "participation but not repetition."<sup>9</sup>

Dan Ariely offers the flip side of Sarah Coakley. At first Ariely's view of human behavior as being predictably irrational would seem to be in stark opposition to Coakley's defense of superrationality. Where Coakley turns over every stone to widen the definition of rationality and rescue it from a narrow utilitarian instrumentalism to argue that emotion and unselfish acts can be perfectly reasonable, Ariely at first seems to be articulating just the opposite. Agreeing with Coakley in her stance against instrumental rationalism, Ariely's cure might seem in her view to be worse than the disease for he appears to simply throw in the towel on rationality entirely: "We are really far less rational than standard economic theory assumes. Moreover, these irrational behaviors of ours are neither random nor senseless. They are systematic, and since we repeat them again and again, predictable."<sup>10</sup> If anything Ariely seems to revel in human irrationality, signing every book and email with "Irrationally yours, Dan." Yet, despite their obvious differences, Coakley and Ariely offer views of rationality that are more alike than they are different.

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<sup>9</sup> Sara Coakley, "Reconceiving 'Natural Theology': Meaning, Sacrifice, and God" (paper presented at the Gifford Lectures at the University of Scotland in Aberdeen, Scotland, May 3, 2012).

<sup>10</sup> Ariely, *Predictably Irrational*, 317.

The main difference between Coakley and Ariely rests in philosophical strategy: where Coakley desires to expand the understanding of rationality to encompass emotion and self-giving, Ariely accepts the instrumental view, what he refers to as the standard economic view of rationality, and then highlights how humans predictably stray. But, here is where Ariely and Coakley come together: Ariely expands our understanding of irrationality showing us not only how irrationality can lead to error but how there is what he refers to as an upside to irrationality. This insight is how Ariely's project is similar to Sarah Coakley's even as he goes about it in the opposite way. Whereas Coakley challenges a narrow definition of rationality, Ariely opens up a new range of possibility for irrationality. While it is absolutely true that human predictable irrationality can lead to mistakes that harm self and other, it is also in our irrationality, according to Ariely, that we see our finest, most noble humanity. Resonating with Ariely's position 'Wrongologist' Kathryn Schulz writes: "It is our meta-mistake: we are wrong about what it means to be wrong. Far from being a sign of intellectual inferiority, the capacity to err is crucial to human cognition. Far from being a moral flaw, it is inextricable from some of our most humane and honorable qualities: empathy, optimism, imagination, conviction, and courage. And far from being a mark of indifference or intolerance, wrongness is a vital part of how we learn and change."<sup>11</sup>

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<sup>11</sup> Kathryn Schulz, *Being Wrong: Adventures in the Margin of Error* (New York: Harper Collins, 2010), 5.

For example, the standard model of rationality does not encompass the notion of fairness or justice. Wholly rational actors make choices to maximize their individual utility even if some wind up with more than others. Ariely's work uncovers, however, how our human irrationality drives our sense of fairness and justice. The ultimatum game is a simple game with two players. The job of one player is to divide a pot of money, and the job of the second player is to decide whether the players will receive the split or whether to decide neither player gets anything. With a twenty dollar pot the first player could divide the money unequally giving nineteen dollars to herself and only one dollar to her partner, or she could divide the money equally or in any other split she chooses. If both players were perfectly rational according to the standard, instrumental self-interested definition of rationality, the first player would be wise to give herself nineteen dollars and give her partner one dollar. One dollar is not much, but the second player would choose to receive the money because one dollar is better than nothing. Yet, when actual human beings play this game, not only do very few people try splitting the money in such an unfair manner; but when they do, the second players would rather have nothing than see the first player walk away with what does not feel fair.<sup>12</sup>

In most cases, the word "irrationality" has a negative connotation, implying anything from mistakenness to madness. If we were in charge of designing human beings, we would probably work as hard as we could to leave irrationality out of the formula; in *Predictably Irrational*, I explored the downside of our human biases. But there is a flip side to irrationality, one that is actually

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<sup>12</sup> Ariely, *The Upside of Irrationality*, Kindle locations 3532-3533.

quite positive. Sometimes we are fortunate in our irrational abilities because, among other things, they allow us to adapt to new environments, trust other people, enjoy expending effort, and love our kids. These kinds of forces are part and parcel of our wonderful, surprising, innate—albeit irrational—human nature (indeed, people who lack the ability to adapt, trust, or enjoy their work can be very unhappy). These irrational forces help us achieve great things and live well in a social structure. The title *The Upside of Irrationality* is an attempt to capture the complexity of our irrationalities—the parts that we would rather live without and the parts that we would want to keep if we were the designers of human nature. I believe that it is important to understand both our beneficial and our disadvantageous quirks, because only by doing so can we begin to eliminate the bad and build on the good.<sup>13</sup>

So, Sarah Coakley and Dan Ariely agree that the standard, instrumental definition of rationality is neither helpful nor particularly descriptive, but they offer radically divergent solutions for how rationality should be understood. Coakley expands the definition of rationality itself, complaining that proponents of instrumental rationality defend a very new and extremely truncated understanding of reason. Coakley's understanding of reason provides for not only common acts of self-giving but even allows for the superrational act of Christ's sacrificial death. Ariely, on the other hand, moves in the opposite direction. Ariely allows the instrumental definition of rationality to stand but shows that while people are often calculating and self-interested, they also manifest a predictable irrationality. Sometimes this irrationality leaves people worse off individually and collectively, such as when status quo bias leads to extremely

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<sup>13</sup> Ariely, *The Upside of Irrationality*, Kindle location 194.

low organ donation rates. But, at the same time Ariely sings the praises of irrationality, lifting up people's irrational generosity and sense of fairness and justice.

While Coakley and Ariely substantively agree in their critique of instrumental rationality, the rationalism of scientific reductionism and the economic standard model respectively, their different solutions demand a choice. There is much to commend both understandings. Coakley's strategy makes particular sense given her deterministic evolutionary foes who argue that religion is irrational simply by virtue of being emotional and sacrificial. To cede the question of rationality would be perhaps, in that fight, to give up too much ground. The challenge with Coakley's argument, though, is the complexity and degree of difficulty required to make the case well. Few have Coakley's astounding mastery of the theological tradition, much less her command of the western philosophical tradition and evolutionary biology. While I agree with Coakley's argument that rationality can include emotion and self-giving, Ariely's acceptance of the common understanding of rationality is easier to follow. Plus, Ariely's sophisticated interpretation of irrationality's dual nature commends itself as the working understanding of rationality in a behavioral theological context.

Ultimately, what is at stake here is the right understanding of what it means to have a *ψύχης λογικῆς*, a rational soul. If, as some might naturally suppose, Jesus has a rational soul in the standard instrumental definition of rationality and is perfect in his humanity without sin, then the findings of cognitive psychology and behavioral



economics may seem irrelevant to a properly understood Christology. They could even be seen to be at odds. In agreement with Coakley, however, Chalcedon does not claim that Jesus has a perfect rationality in any kind of narrow instrumentalist sense of the word. This modern sense of rationality did not yet exist. Given the work of Coakley and others in demonstrating the fluidity the term rational has enjoyed historically, the best understanding of ancient rationality looks far more like Simon's bounded rationality than the instrumental perfection of classical economics. Bounded rationality allows for human agency and will, respects the role of the reflective System 2, and yet allows for the predictable irrationality that Dan Ariely suggests is a result of organic finitude. This irrationality, according to Ariely, will not only manifest in lamentable error, but this irrationality will also be precisely where the best of our humanity surfaces: our compassion and sense of justice. Such a nuanced view of rationality will help to flesh out what the conveners of Chalcedon merely sketched in referring to Christ's humanity and rational soul. Given, then, this nuanced view of rationality and the idea that Christology is the proper starting point for theological anthropology one would expect to see evidence of this predictable irrationality in the behavior of Jesus himself.

## 4. The Irrational Jesus

By describing Jesus as irrational, I argue that the evangelists offer portraits of Jesus honest enough to show the presence of powerful emotion, physical limitation, remarkable lack of self-interest, and a limited ability to foresee the future. Consistent with Simon's bounded rationality, I am not arguing that Jesus is entirely irrational, merely that in his humanity Jesus is limited by time and place. As with all human beings, Jesus is rational to the extent that information, cognitive process, and time allow; but given imperfect information, predictable blind spots generated by heuristics and biases, and the pressure of limited time, it is not only fair but also exegetically helpful to think of Jesus as being partly driven by deep irrational forces at times. Moreover in alignment with Dan Ariely, I will show that not only do these forces lead Jesus to make regrettable statements, but also it is in this very irrationality that one sees his compassion and hunger for justice. One sees Jesus as fully human, a man "who in every respect has been tested as we are, yet without sin" (Hebrews 4:15).

Irrational forces play strong roles in the life of Jesus as narrated by the evangelists. This irrationality falls into five major categories: there is the presence of strong emotion in Jesus' life; the Gospels portray Jesus as having limited knowledge; although controversial and subject to interpretation, Jesus makes mistakes in the Gospels; some of the actions taken by Jesus are consistent with the actions behavioral theorists would expect of humans subject to cognitive limitations; and kenosis marks the

life and teachings of Jesus. Jesus' most significant act, his sacrificial death, merits its own discussion in this regard.

One of the fundamental tenets of behavioral theory is that strong affect plays an enormous and often overlooked role in judgments and decisions. Whereas 'econs', the term designated by Cass Sunstein and Richard Thaler to describe perfectly rational Spock-like idealized people, will make decisions unaffected by emotions, feelings do color every thought, perception, and decision for actual human beings swayed by cognitive limitations such as framing, status quo bias, and loss aversion.<sup>1</sup> Whereas one simply would not see the presence of strong emotion in perfectly rational souls, one sees emotion constantly wash over human beings shaped by bounded rationality. In the Gospel descriptions of Jesus, and in the synoptic narratives in particular, the evangelists show Jesus to be a person almost constantly affected by powerful emotion.

In two of the Gospels, Matthew and John, Jesus initiates ministry in ways that are deeply emotional. In Matthew, as in all of the synoptic accounts, after his baptism Jesus is hurled by the spirit into the wilderness to be tested by Satan. While Mark simply acknowledges this account and Luke portrays Jesus in a more rational and philosophical mode, Matthew shows Jesus forcefully denouncing the devil after the third temptation. After offering Jesus all of the kingdoms to rule, Jesus responds: "Away with you, Satan! for it is written, 'Worship the Lord your God, and serve only him'" (Matthew 4:10).

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<sup>1</sup> Sunstein and Thaler, *Nudge*, 7.

While the reader has no access to Jesus' tone and volume, it is hard not to feel a sense of anger and passion in Jesus' words.

Better evidence for Jesus' anger comes from the Gospel of John. While the cleansing of the temple occurs toward the end of the synoptic accounts after Jesus has entered Jerusalem, the Johannine witness places the cleansing of the temple at the beginning of Jesus' ministry. In John 2 Jesus takes whips and cords to forcefully expel those exchanging idolatrous Roman coinage for acceptable Hebrew currency. John shows Jesus turning over tables and denouncing those selling doves as turning his Father's house into a marketplace. The disciples remark on Jesus' zeal, a word connoting powerful emotion indeed.

Strong emotion does not just mark the beginning of Jesus' ministry, but constantly colors it. Several times different evangelists write that Jesus is filled with pity or is moved by pity. In Matthew 9:36 when Jesus looks at the crowds gathering around him in the wilderness, he is moved by pity seeing how they were like a sheep without a shepherd. Later in Matthew Jesus heals two blind men: "Moved with compassion, Jesus touched their eyes" (Matthew 20:34). In these and other examples the Greek word for moved by pity is *σπλένγθομαι*, a powerful, Homeric word meaning that Jesus was literally moved in his "inward parts or entrails."<sup>2</sup> One instance is especially interesting.

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<sup>2</sup> Walter A. Bauer and F.W. Gingrich, *A Greek-English Lexicon of the New Testament and Other Early Christian Literature*, 2<sup>nd</sup> ed., eds. William F. Arndt and F.W. Danker (Chicago: University of Chicago Press, 1979), 763.

In Mark 1:40 a leper approaches Jesus seeking healing. The manuscript tradition differs as to whether Jesus is moved with pity, *σπλαγγνίσθεις* or whether he is angered, *ὀργίσθεις*. Eugene Boring points out due to the textual rule of *lectio difficilior* many interpreters prefer the reading of Jesus being angry to Jesus being moved with compassion even though the textual evidence for *σπλαγγνίσθεις* is more robust.<sup>3</sup> The salient point here is that both readings indicate Jesus experiencing a deep and powerful emotional state. Another example includes the famously short verse in John when Jesus grieves the death of his friend Lazarus: “Jesus began to weep” (John 11:35). While Luke and John mute the emotion in the suffering and crucifixion narratives, Matthew and Mark both describe Christ as suffering agony in the garden of Gethsemane. Matthew describes Jesus as “grieved and agitated” (Matthew 26:37), going back and forth with God over his impending death. Matthew’s Jesus even sounds like a behavioral theorist when he tells the disciples: “The spirit indeed is willing, but the flesh is weak” (Matthew 26:41). On the cross itself Jesus cries out: “My God, my God, why have you forsaken me?” (Matthew 27:46). While some have argued that because this cry of dereliction was quoting Psalm 22 that ends as a call to trust, this cry was not tortured but hopeful.<sup>4</sup> Given the strong presence of emotion in Jesus’ life, this interpretation seems strained. The picture of Jesus that emerges in the earliest Gospel strata is not a perfectly rational

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<sup>3</sup> Eugene Boring, *Mark, A Commentary: The New Testament Library* (Louisville: Westminster John Knox Press, 2006), 70.

<sup>4</sup> Joel Marcus, *The Way of the Lord: Christological Exegesis of the Old Testament in the Gospel of Mark* (Minneapolis: Fortress Press, 1992), 177-182.

econ quietly and with total equanimity breezing through ministry but a passionately emotional man given to deep compassion, blistering anger, and sorrowful tears.

A second fundamental component of Jesus' irrationality is his lack of perfect knowledge. With perfect knowledge rational agents can sift through every option to make the best possible decision, but, as behavioralists note, humans simply do not have access to all this information and even if they did would not be able to process it perfectly due to cognitive limitations. Jesus, as a fully human person, manifests lack of perfect knowledge in two significant ways: first, more in what he does not say; and second, in what he does say. It is evident through what he does not say that Jesus was indelibly shaped by the times in which he lived: Jesus' humanity was bound by particularity; he lived in a particular time and a particular place. Second, the Gospels leave a record of Jesus openly, if rarely, admitting to lack of knowledge.

Jesus was a man of his time; he was shaped by the history, geography, language, and culture of first century Palestine. What the writers of the Reformed Confession of 1967 say of the evangelists is true also of Jesus: he was "conditioned by the language, thought forms ... reflecting views of life, history, and the cosmos which were then current."<sup>5</sup> Many attempts to understand the first century Jesus suffer from projecting the worldview of the author, leading to the famous observation made by George Tyrrell that

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<sup>5</sup> "The Confession of 1967," in *The Constitution of the Presbyterian Church (U.S.A.): Part 1 Book of Confessions*, (Louisville, KY: The Office of the General Assembly of the Presbyterian Church (U.S.A.), 9.29, 257.

the search for the historical Jesus amounts to little but scholars staring into a deep well only to find their own reflection.<sup>6</sup> However, recently far more attention has been given to the ways in which Jesus' context shaped him. As Amy-Jill Levine writes: "Jesus of Nazareth dressed like a Jew, prayed like a Jew (and most likely in Aramaic), instructed other Jews on how best to live according to the commandments given by God to Moses, taught like a Jew, argued like a Jew with other Jews, and died like thousands of other Jews on a Roman cross."<sup>7</sup> More specifically, Luke Timothy Johnson asserts that the Jewish apocalyptic worldview of the first century profoundly shaped Jesus.<sup>8</sup> Notably, E. P. Sanders among others has written extensively that the way to understand Jesus best is to place him within the first century apocalyptic eschatology: he articulated and believed in cosmic dualism as well as an apocalypse, or revelatory moment, that would usher in an imminent end to the age in which he was living.<sup>9</sup> Simply put, this apocalyptic conceptual framework thoroughly marked and shaped Jesus' humanity. While Athanasius worked hard to remind the believer that Christ in his divinity was not fettered by this first century worldview, a behavioral perspective would emphasize how much Jesus was indeed shaped by his surroundings. Behavioral Christologists need not disagree with Athanasius; but they would stress that while Jesus might not be fettered

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<sup>6</sup> George Tyrrell, *Christianity at the Crossroads* (1910) (Whitefish, MT: Kessinger LLC, 2013), 44.

<sup>7</sup> Amy-Jill Levine, *The Misunderstood Jew: The Church and the Scandal of the Jewish Jesus* (New York: Harper Collins, 2006), 51.

<sup>8</sup> Luke T. Johnson, *The Writings of the New Testament* (Philadelphia: Fortress Press, 1986), 48.

<sup>9</sup> E.P. Sanders, *The Historical Figure of Jesus* (London: Penguin Books, 1993), 95.

by the culture, language, and apocalyptic worldview of the time, it is impossible to overstate how much these factors did shape him. Is this enculturation limiting? To the extent that Jesus in his humanity could not think of the world other than in the thought forms and language of his day, this enculturation is, by definition, limiting. As Derek Sivers cleverly puts it: “enculturation is like one fish asking another fish about how the water is and the second saying, ‘Water? What’s water?’”<sup>10</sup> Jesus, at least in his humanity, was bound as all human beings are by particularity. Jesus was not an *econ* with perfect knowledge but a human who lived in a certain place at a certain time.

On a more prosaic level Jesus also admits in at least two clear instances to not possessing perfect knowledge. Each of the Synoptics narrates the story of Jesus healing a woman with a hemorrhage. Beautifully intercalating this story with the healing of Jairus’ daughter, the author of Mark describes a woman who pushes through the crowd to touch the hem of Jesus’ garment believing that if she is able to do so she would be healed. As so often is the case in Mark, something happens immediately. Mark writes that power flows from Jesus resulting in the woman’s healing. What is interesting in this discussion is that Jesus is unaware of exactly what happens. Sensing that power left him Jesus scans the crowd; he is unsure who it is that came forward. “Who touched my clothes?” he asks the disciples. The disciples, not depicted by Mark as being especially

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<sup>10</sup> Derek Sivers, “Fish Don’t Know They’re In Water,” June 6, 2011, accessed January 9, 2013, <http://sivers.org/fish>.



bright, are no help to Jesus. "You see the crowd pressing in on you," they protest. "How can you say, 'Who touched me?'" (Mark 5:21–34).

Perhaps one might respond that this example stems from a small and relatively unimportant instance. One might argue that Jesus' knowledge of what happens to him minute by minute need not be perfect. What is important is that Jesus has perfect knowledge of truly significant events. Yet few things could be more important, especially to a man with an apocalyptic eschatology, than knowledge regarding the coming of the kingdom. However, in both Mark's little apocalypse and in Matthew's Gospel Jesus confesses to his disciples that he does not know exactly when the Son of Man will come: "But about that day or hour no one knows, neither the angels in heaven, nor the Son, but only the Father" (Mark 13:32; Matthew 24:36). Note that Jesus does not tell the disciples that he possesses this information but chooses not to share it with them. Jesus says the son simply does not know when this time will take place. In his full humanity even Jesus himself is not entirely clear about the plan.

In addition to emotion playing a strong role in Jesus' humanity and his limited knowledge, Jesus also appears to make what can only be called mistakes from time to time. One common criticism leveled against Jesus is that he exhibits botanical ignorance when he claims the mustard seed to be the smallest of seeds. While clever plant lovers jump out of their chairs to point out that mustard seeds are not, in fact, the most diminutive seeds in the world, apologists, anxious to defend Jesus, point out that Jesus

was telling a parable rather than giving a lecture in botany.<sup>11</sup> Moreover, those desiring to defend Jesus cite first century sources to confirm that mustard seeds were proverbially believed to be the smallest, suggesting that while Jesus himself may have known the truth, he was speaking in a way his limited contemporaries would understand.<sup>12</sup> A behavioral Christology allows the interpreter to avoid such an involved exegetical contortion. A behavioral Christology can admit that Jesus, in his humanity, was indeed limited in his understanding of botany, and then move on untroubled, able to focus more on the meaning of the parable than on the question of Jesus' mistake.

But mistakes occur that we cannot attribute to Jesus' human knowledge simply being bound by his time. In Mark 2:25–26 Jesus was accused of breaking Sabbath laws when he and his disciples ate grain they picked along a field as they traveled. Jesus, likening himself to David, reminds his interlocutors that the great king himself went into the temple and ate the loaves of offering when Abiathar was high priest. The only problem with this defense is that Abiathar was not high priest when David ransacked the temple for the Hebrew equivalent of the communion bread. In 1 Samuel 21:1 we learn that David took the bread when Ahimilech, Abiathar's father was priest rather than Abiathar who does not appear for another chapter. Is it possible that the author of Mark made an error, or that a translation error occurred, or that through the years a

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<sup>11</sup> Tremper Longman III and David E. Garland, eds., *The Expositor's Bible Commentary*, vol. 9 (Grand Rapids, MI: Zondervan, 2010), 762.

<sup>12</sup> Clifton C. Black, *Abingdon Commentary on Mark* (Nashville: Abingdon Press, 2011), 127.

sleepy monk failed to transcribe this text accurately? All of these explanations are possible, although there is no evidence of a transmission error in the manuscript tradition. The simpler possibility is that Jesus, in his humanity, simply made a small factual error. It is possible that Jesus, like all human beings, committed a slip of the tongue. While unsettling at first to those with a Docetic view of Jesus, this simple interpretation does not impinge on Christ's divinity and is certainly more elegant than having to conjure up a tired monk when no history of a manuscript issue exists.

Jesus is not merely prone to relatively insignificant slips of the tongue either. In Mark 8:22–26 Jesus encounters a blind man in Bethsaida. Applying saliva to the man's eyes and laying his hands on him, Jesus asks the man if he can see. The man replies that he is able to see people except that they look like walking trees. Staring at the man intently, Jesus lays his hands on the man's eyes a second time. This second effort does the trick, and the man is able to see normally again. Interpreters have struggled with this partial healing since the first century. Some argue that Jesus healed the man partially on purpose as a symbolic gesture to indicate how the disciples see and understand only in part.<sup>13</sup> Or, it is possible that the double healing refers to the two epochs commonly envisioned in apocalyptic dualism.<sup>14</sup> But again, how much more elegant is it to acknowledge that in his humanity Jesus became tired, thirsty, and sometimes made a

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<sup>13</sup> Joel Marcus, *The Anchor Yale Bible*, vol. 27A (New Haven: Yale University, 2009), 597.

<sup>14</sup> Marcus, *The Anchor Yale Bible*, 600.

mistake even in something as important as his healing ministry? Understanding that Jesus makes mistakes does not diminish his divinity; minor errors like this partial healing only underscore his humanity. What kind of real humanity could Jesus have were he not prone, as all human beings are, to error?

Even greater than a slip of the tongue and more damaging than a two-part healing is Jesus' excruciating encounter with the Syrophoenecian woman. A deeply troubling text for lectionary preachers who must face this scripture at least once every three years, few pericopes in the New Testament inspire more defensiveness and indignation than Jesus' conversation with the Syrophoenecian woman. Away in Tyre a local woman with a suffering daughter discovers Jesus and requests his help. Jesus delivers this chilling response: "Let the children be fed first, for it is not fair to take the children's food and throw it to the dogs" (Mark 7:27). Referring to the children of Israel and the Gentiles, Jesus tells the woman that he is interested in helping Jews first. It is only possible to understand dogs as a slur referring to Gentiles.

The exegetical gymnastics inspired by this ignominious moment testify to the anxiety a fully human Jesus provokes. One of the more daring interpretations is that Jesus was not actually saying anything harsh to the woman at all. The word Jesus uses for dogs here is *τοῖς κυναρίοις*, the diminutive form. In this reading Jesus is not calling

her or other Gentiles dogs but something more like little puppies.<sup>15</sup> In this interpretation Jesus is really just using a literal pet name for the woman, which should be heard by the reading community as being endearing. The notable William Barclay hypothesized that Jesus was playing with the woman, using a jesting tone, and smiling to let her know he was not intending his words with cruel intent.<sup>16</sup> Others attempt to salvage Jesus by arguing that while what he says is cruel, he only means it to test the woman.<sup>17</sup> While this interpretation at least acknowledges the harsh tone by Jesus, scholars like David Lose point out that Jesus' statement bears no marker of being a test. Rather, his statement appears to resemble a thoughtless remark offered without reflection, something all human beings are prone to saying, especially when discovered while hiding out on vacation.

The more elegant, simple reading is that Jesus in his full humanity makes a thoughtless statement. Perhaps due to the strong short-term emotion of being bothered while lying low Jesus speaks rashly and angrily. Perhaps because of the representative heuristic, Jesus falsely assumes this Gentile woman was not intellectually or emotionally worth his time. Perhaps it is simply because Jesus is exhausted. In a telling study of an Israeli parole board it turns out that the most significant factor in whether a case was

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<sup>15</sup> Bas Van Iersal, *Mark: A Reader-Response Commentary* (Sheffield, UK: Sheffield Academic Press LTD, 1998), 250.

<sup>16</sup> William Barclay, *The Gospel of Mark, The New Daily Study Bible* (Louisville, KY: Westminster John Knox Press, 2001), 207.

<sup>17</sup> Kelly Iverson, *Gentiles in the Gospel of Mark* (New York: T&T Clark International, 2007), 48-54.

decided positively or negatively was the time of day the case was heard. After surveying over 1,000 cases researchers discovered that prisoners facing the board in the morning had a 70% chance of receiving parole, compared to just 10% for those who appeared late in the day.<sup>18</sup> Chalked up to ‘decision fatigue’, psychologists hypothesize that the easily exhausted System 2 yields decision making ability to System 1, which in this case is far more likely to see prisoners as existential threats.

Whatever the reason, the woman surprises Jesus and the reader by giving back as good as she gets. Called an unworthy dog, the Syrophoenician woman spits back: “Sir, even the dogs under the table eat the children’s crumbs” (Mark 7:28). The woman deftly accepts the label of dog given to her by Jesus, pointing out that the dogs in his analogy are still fed. Realizing himself bested, what else can Jesus do but respond: “For saying that you may go—the demon has left your daughter” (Mark 7:29). At this point one can sense Barclay may have been right about Jesus smiling; it was just that Barclay was wrong about the why and when Jesus smiled. One can imagine a knowing smile crossing Jesus’ face as he responds to this woman’s brilliant riposte, a generous acknowledgment of his mistake. Peter Hawkins of Yale notes the full humanity of Jesus on display: “There is one occasion, however, that stands out among these human moments—an occasion when we see him learn something new and, as a result, become

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<sup>18</sup> John Tierney, “Do You Suffer from Decision Fatigue?” *The New York Times*, August 21, 2011, accessed January 9, 2014, <http://www.nytimes.com/2011/08/21/magazine/do-you-suffer-from-decision-fatigue.html>.

someone different; as recorded by Mark as well as Matthew, Jesus is brought up short by an unexpected truth. Not only does he change his mind, but does so in a breathtaking 180-degree turn. Most astonishing of all, it is a pagan woman who makes him do it.”<sup>19</sup> While initially it may be difficult to accept that Jesus in his full humanity is capable of weak moments, ultimately it makes for more elegant exegesis with a strong ability to preserve the plain sense meaning of the text.

Not only does a behavioral lens elucidate the powerful way emotion affects Jesus, the limited knowledge Jesus possesses, and the mistakes he appears to make now and again in the Gospels, but a behavioral perspective also shows that patterns Jesus employs resonate with the guidance behavioral theorists offer regarding effective ways to cope with the blind spots that come with human cognition. One of the easiest patterns to note in Jesus’ life includes his constant habit of retreat: finding solitary places to pray; seeking the wilderness places; and just putting distance between himself and those depending on him. A vast amount has been written regarding the spiritual wisdom in this pattern of time with, and time apart from, ministry. Less well studied, however, is the cognitive necessity of getting distance from emotionally charged situations.

In their book *Decisive* Chip and Dan Heath offer a behavioral framework for decision making. When it comes to making a choice, for instance, the Heaths lift up the problem of short-term emotion: “Perhaps our worst enemy in resolving these conflicts is

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<sup>19</sup> Peter Hawkins, “Dogging Jesus,” *The Christian Century* 122, no. 16 (2005), 18.

short-term emotion, which can be an unreliable adviser. When people share the worst decisions they've made in life, they are often recalling choices made in the grip of visceral emotion: anger, lust, anxiety, greed. Our lives would be very different if we had a dozen 'undo' buttons to use in the aftermath of these choices. But we are not slaves to our emotions. Visceral emotion fades. That's why the folk wisdom advises that when we've got an important decision to make, we should sleep on it. It's sound advice, and we should take it to heart. For many decisions, though, sleep isn't enough. We need strategy."<sup>20</sup> One of the most powerful strategies the Heaths recommend is simply putting distance, physical and emotional distance, between people and a difficult choice environment. This distance allows human beings to move from a more emotionally labile hot state associated with the automatic system, to a cooler state associated with the reflective system. In other words distance and alone time does not just allow Jesus *time* to gather his thoughts as if all he needed were time to rationally assess his plan; it allows him the *space* in which reflective thought is actually possible. Without space, Jesus, like all human beings, would be acting on automatic, and as already discussed regarding the Syrophenician woman, even Jesus is capable of a thoughtless moment when acting on impulse.

Another practice somewhat unique to Jesus, at least in the manner in which he goes about it, is the way he gathers disciples around him. First, not all ancient teachers

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<sup>20</sup> Heath and Heath, *Decisive*, Kindle locations 2488-2493.



and healers surrounded themselves with students. Jewish mystics like Honi the Circle-Drawer<sup>21</sup> and Chanina ben Dosa<sup>22</sup> famous for their devotion to prayer and ability to miraculously change the weather did not surround themselves with disciples. Itinerant Greek healers like Apollonius of Tyana was said, like Jesus, to have raised a little girl from the dead, but he did not call disciples.<sup>23</sup> Possible reasons abound for why Jesus called the disciples. Because Jesus gathered twelve disciples, many make the obvious connection to the twelve tribes of Israel. With the twelve disciples Jesus creates a symbolic new Israel, perhaps a sign and promise of the reign of God already breaking into the present age. On a more mundane level, though, Jesus gathered the disciples around him because they were helpful. While much is rightly made of the questionable quality of the twelve (i.e., they argued among themselves, constantly misunderstood Jesus' teachings, and ultimately betrayed him), Jesus often relied on them. Jesus leaned on the disciples to feed and care for the crowds at the miraculous feeding, saying to them: "You give them something to eat" (Matthew 14:16). He sends the disciples out two by two to neighboring towns with specific instructions regarding their dress and behavior. After his resurrection he commanded the disciples to carry on the mission he initiated charging them to hand down his teachings and to baptize in the name of the

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<sup>21</sup> Flavius Josephus, *Complete Works of Josephus Flavius: Wars of the Jews, Antiquities of the Jews, Against Apion, Autobiography*. Interlinked edition incl: maps, timelines, family trees, coinage (New York: Mobi Classics, 2010), Kindle locations 22091-22092, Kindle.

<sup>22</sup> David R. Cartlidge and David L. Dungan, eds., *Documents for the Study of the Gospels* (Minneapolis: Augsburg Fortress Press, 1994), 157.

<sup>23</sup> Cartlidge and Dungan, *Documents for the Study of the Gospels*, 227.

Father, the Son, and the Holy Spirit. Indeed, at least in Matthew's account Jesus elevates Peter as a kind of first among equals, giving him the "keys to the kingdom" (Matthew 16:19).

By choosing disciples, equipping them for ministry, and introducing a level of organization among them Jesus created at least the rudiments of an institution. While bias shapes institutions and the mere fact of organizing does not, in and of itself, mean better decision making, Daniel Kahneman points out that institutions can be an extremely helpful tool in improving our thinking: "Organizations are better than individuals when it comes to avoiding errors, because they naturally think more slowly and have the power to impose orderly procedures. Organizations can institute and enforce the application of useful checklists, as well as more elaborate exercises, such as reference-class forecasting and the premortem."<sup>24</sup> It is possible that Jesus chooses not to go it alone not only to create a symbolic new Israel or for the simple practical help that more hands offer. It is possible that Jesus surrounds himself with disciples as a safeguard to his own full humanity. While institutions do not guarantee good decisions, and the disciples certainly made their share of mistakes, gathering more voices increases the likelihood of disagreement, a key behavioral element to avoiding confirmation bias. And, disagreement certainly presented itself between Jesus and the twelve. While some

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<sup>24</sup> Kahneman, *Thinking, Fast and Slow*, 417-418.

lament this discord, a behavioral perspective suggests productive disagreement is superior to unreflective unanimity.

The most significant evidence for Jesus' irrationality appears in the selflessness that marks his life and teachings. The fundamental underpinning of the standard, instrumental rationality is that after agents sift through their options calculating the most advantageous choice for them, the rational actor will choose this path. Rational actors choose what is best for them, according to rational choice theory. If this premise is not true, then the theory is discredited. On this point Jesus' irrationality takes our breath away. The very essence of Jesus' life and teachings stands in direct opposition to the utility maximization of instrumental rationality. It scarcely requires mention that Jesus lived and died, as Dietrich Bonhoeffer put it, as "the man for others."<sup>25</sup> The most consistent feature of Jesus' itinerant ministry around the Galilee was the crowds that massed around him seeking healing. Almost without exception Jesus gave himself to these others, no matter their state of ritual cleanliness or whether it was the Sabbath. Crossing lines of religion, race, and gender Jesus constantly poured himself out. He healed pagan demoniacs and taught women, saying of Mary that she "has chosen the better part, which will not be taken away from her" (Luke 10:42). This self-giving behavior is what many Christians hold most dear about Jesus.

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<sup>25</sup> Dietrich Bonhoeffer, *Letters and Papers from Prison: New Greatly Enlarged Edition*, ed. Eberhard Bethge (New York: Simon and Schuster, 1997), 381.

This kenosis pervades his teachings. What could be less rational according to the standard economic model than Jesus' description of the landowner in the parable of the laborers in Matthew 20:1–16? The kingdom of heaven is like a landowner who goes out and hires laborers. Some of these laborers are hired in the morning, some later in the day, and some at the very end, and yet they are all paid the same wage. Enraged, they demand that the landowner pay them fairly. The landowner tells them not to compare themselves to one another and to be happy with what they have been given. To be sure Jesus' primary point here is theological and not economical: he is emphasizing the grace of God and perhaps making room for latecomers to faith, saying it does not matter when someone comes to faith just that they come to faith. But, one cannot help but be astonished at Jesus asking his followers to imagine a world driven not by instrumental rationality, fair pay for a fair day's work, but a world driven by grace and generosity. This thought experiment is as radical today as it was when it was first uttered.

And what about the entirety of Luke 15? Being accused of spending time with all the wrong people, Jesus tells the Pharisees and scribes the parable of the lost sheep: "Which one of you, having a hundred sheep and losing one of them, does not leave the ninety-nine in the wilderness and go after the one that is lost until he finds it?" (Luke 15:4). Jesus' point in this parable is the joy God experiences over the lost being found, but the instrumental rationalists have to be scratching their heads in response, thinking to themselves that no rational person would leave ninety-nine sheep to go after one.

According to the standard economic model a rational person would just chalk it up to a frustrating but expected loss, a kind of flock depreciation. As if seeing they were not getting it, Jesus continues with the parable of the coins, switching the metaphor from animals to money. And finally, Jesus offers the absolutely stunning parable of the prodigal son, perhaps the finest articulation of grace ever offered. A man with two sons faces defection from the younger, who asks his father for his inheritance and runs off on a spending spree that leaves him at rock bottom. Coming up with a clever apology to offer his father, the boy is shocked to find his father standing at the edge of the horizon with a robe in one hand and a ring in the other. Before the boy can utter his self-interested apology, the father has wrapped the boy in his arms and called for the party to begin. The elder brother, an instrumental rationalist through and through, grumbles at this absurd behavior saying: "Listen! For all these years I have been working like a slave for you, and I have never disobeyed your command; yet you have never given me even a young goat so that I might celebrate with my friends. But when this son of yours came back, who has devoured your property with prostitutes, you killed the fatted calf for him!" (Luke 15:29–30). The elder brother, a figure living inside all humans, wants to earn his father's love in a rational world in which a fair amount of love is given in exchange for a fair amount of obedience. To this absurdity, the irrational Jesus can only laugh.

As important as Jesus' life and teachings are, the Gospels concur that the lens through which Jesus becomes intelligible in his entirety is his sacrificial death and subsequent resurrection. In Jurgen Moltmann's view of Jesus we discover the crucified God; in Karl Barth's Christology we find the judge judged in our place. The centrality of Jesus' sacrificial death offers nothing less than a hinge around which everything turns. But how does one understand Jesus' sacrifice? Should we side with Rene Girard who views Jesus' death as an act of original mimetic violence, the ultimate act of negative irrationality?<sup>26</sup> Perhaps we should again consider following the wisdom of Sarah Coakley who, by aligning with Martin Nowak's new game theoretic findings, would claim a kind of rationality for Jesus' self-offering. Or, is there yet another way of understanding this crucial moment?

Two concepts are important to state at the outset. In understanding Jesus' sacrifice, I will follow the more biblical view that Jesus willingly offered his life in opposition to the mechanistic understanding of penal substitution, which can only see Jesus as the passive victim of an angry Father. In John Jesus states that he chooses sacrifice: "I lay down my life in order to take it up again. No one takes it from me, but I lay it down of my own accord," (John 10:17-18). Implicit in the synoptic account of Jesus wrestling with this decision in the garden of Gethsemane is his ability to choose a

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<sup>26</sup> Rene Girard, *Sacrifice*, trans. Matthew Patillo and David Dawson (Lansing: Michigan State University Press, 2011), Kindle location 454, Kindle.

different path, but after struggling to the point of sweating blood Jesus chooses Golgotha. Jesus' agency on this point is paramount, for if there is no choice involved, there is no question of rationality or irrationality.

Second, while I will rely heavily on Sarah Coakley's brilliant exposition of why sacrifice is such a challenging belief today, I will continue to define rationality more narrowly than she does. Indeed, I am well aware that Coakley's project largely rests in redefining rationality more broadly so as to allow for a new appreciation of how religion and reason cohere. Again, I can only state my appreciation for her work and agreement with her dissatisfaction over utilitarian definitions of rationality, but I will continue to follow Ariely's strategy of undermining the standard economic model of rationality on its own terms. To this point a standard understanding of rationality as fundamental emphasis on self-interest brands sacrifice irrational by definition. In a standard understanding of rationality Jesus' sacrifice may be seen as emotionally compelling, foolish, or even self-destructive, but it certainly may not be seen as rational.

In *Sacrifice Regained: Reconsidering the Rationality of Religious Belief*, Coakley's inaugural lecture at Cambridge in 2009, she offers a brilliant explication of why the very idea of sacrifice has fallen on such hard times in the late twentieth century. Beginning with Immanuel Kant, Coakley notes how the great philosopher of Königsberg expressed deep reservations over the usefulness of sacrifice and ritual connected with sacrifice. Steeped in what seemed to Kant a primitive emotivism, Kant saw little room for sacrifice

in the rational faith of the *Aufklärung*. At most Kant allowed for the possibility that the faithful might be moved by rituals connected with sacrifice at an early stage, but progress out of this phase through maturity.<sup>27</sup> Kant, in other words, found sacrifice too steeped in blood to be of use to the rational spirit of an enlightened age. More pointedly, Coakley observes, Rene Girard's theory of sacrifice as mimetic violence took Kant's discomfort a step further and argued that sacrifice is not only primitive but also suggestive of a kind of original violence. In short Girard's understanding of sacrifice posits two individuals desiring the same object, and the only way to solve their struggle is through creating a sacrificial scapegoat in the form of a third person. By projecting their mimetic violence onto a third party, they are able to release this violence through sacrifice, thus able to create stable relationships and community.<sup>28</sup> Sacrifice in Girard's view shows humanity at its worst. Indeed, Coakley's intellectual foes such as Sir Richard Dawkins concur with this view and paint all religion, particularly sacrificial religion, as irreducibly irrational and violent and best viewed as a dangerous mental illness.<sup>29</sup>

Coakley proposes a brilliant solution to this incredibly dark view of sacrifice; she works to establish room for what the Apostle Paul termed λόγικε λατρεία, or rational

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<sup>27</sup> Sarah Coakley, *Sacrifice Regained: Reconsidering the Rationality of Religious Belief* (Cambridge: Cambridge University Press, 2012), 11.

<sup>28</sup> Coakley, *Sacrifice Regained*, 13.

<sup>29</sup> Richard Dawkins, *The Selfish Gene: 30th Anniversary Edition--with a new Introduction by the Author* (Oxford: Oxford University Press, 2006), Kindle location 6621, Kindle.



sacrifice.<sup>30</sup> From her partnership with Martin Nowak, Coakley discovered that Dawkins' inherently reductionist, self-interested evolutionary narrative has come under intense pressure by virtue of Nowak's use of game theoretic modeling. Dawkins cleverly argues that any self-sacrificial willingness to cooperate is merely a disguised form of self-interest. In contrast Nowak's project, which I will discuss in detail in a later section, shows convincingly that while selfish behavior is effective for individual flourishing in the short term, it is destructive to the overall health of the community in the long run.<sup>31</sup> Nowak argues that a seemingly irrational willingness to cooperate in the animal and human world is so built in and predictable as to comprise a third foundation of evolution along with natural selection and mutation.<sup>32</sup> Without resorting to a naïve correlationism, Coakley does see in Nowak's revolutionary findings something of an analog to faithful self-offering and argues that at the very least Nowak's work demonstrates how sacrifice can be seen as rational at least when viewed from the level of the community. As noted in the previous section on rationality, Coakley argues Jesus' sacrificial death should not be viewed as irrational at all but as superrational. His self-offering is rational in that self-giving follows a certain line of reason, especially as articulated by Nowak, and it is super in both the excessive nature of his death as well as

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<sup>30</sup> Coakley, *Sacrifice Regained*, 2.

<sup>31</sup> Coakley, *Sacrifice Regained*, 23.

<sup>32</sup> Martin Nowak and Sarah Coakley, eds., *Evolution, Games, and God: The Principle of Cooperation* (Cambridge, MA: Harvard University Press, 2013), 110.

in the fact that it is a death once and for all. Jesus' death needs no repetition, she writes, but rather it invites participation.

Despite what I hope is my obvious admiration and indebtedness to Coakley's groundbreaking work, I maintain that Ariely's strategy of undermining instrumental rationality with a nuanced understanding of irrationality is the stronger position. To begin with, what is one to make of Coakley's term *superrational*? The very fact that she is forced to come up with an awkward neologism suggests that Jesus' sacrifice at the very least stretches the boundaries of rationality. Further, in her later Gifford lectures Coakley herself struggles with the instrumental rationality implicit in Nowak's work. She muses over Nowak's discomfort with the title of his own book *Super Cooperators*, the subtitle of which mentions using altruism for success. Surely altruism for success is a strange understanding of altruism. Far less complicated and easier to understand is the behavioral critique of rationality, which covers the reductionism not only of the economic world but the biological and game theoretic disciplines as well. Ariely's deft move of accepting the common self-interested understanding of rationality to then critique it is as unrealistic and undesirable allows us to view Jesus' sacrificial self-offering as the quintessential act of human irrationality capable of a sublime upside. The virtue of this argument is that there is much room for agreement so that theologians and their interlocutors have room to travel together. Theologians, then, can put their stake in the ground at the end with the claim that Jesus' crucifixion is indeed by definition

irrational, and that this irrationality not only shows his connection with us through our full humanity but shows us the irrational beauty to which our full humanity may aspire.

## 5. Cognitive Bias As Sin Or Full Humanity

In *Predictably Irrational* Dan Ariely juxtaposes two painful stories to make a tragic observation. Ariely recounts how in 1987 the world followed the story of eighteen-month-old Jessica McClure who fell into an abandoned water well in Midland, Texas. While the ordeal only lasted for 58 ½ hours, Ariely notes the media coverage made it seem as if it lasted for months. People were so moved by the story of this little girl that a TV movie was made, ballads were written, and the McClure family received an astounding \$700,000 in donations. Ariely compares this story with an event that happened just a few years later: the Rwandan genocide. Over the span of 100 days around 800,000 people were brutally murdered, many of them little ones every bit as young and defenseless as Baby Jessica. And, the world's response? Were people 800,000 times more moved by what unfolded in Rwanda? The response was not even close. News outlets such as CNN provided more coverage for Baby Jessica than for the entire Rwandan atrocity. Individual Americans gave vastly less money, ballads were not sung, and the network executives decided to pass on any made for TV specials. Both the world response and lack of response pose difficult questions. Why, Dan Ariely asks, "do we jump out of our chairs and write checks to help one person, while we often feel no great

compulsion to act in the face of other tragedies that are in fact more atrocious and involve many more people?”<sup>1</sup>

While racism and a sense of being overwhelmed in the face of such a massive tragedy no doubt play a factor, Ariely turns to experimental data for an explanation. Ariely and his colleagues conducted an experiment in which people were given a small amount of money for completing a questionnaire and then given an opportunity to donate some of this newfound largess. One group was presented with a personal story of a Malian girl named Rokia. Participants were told their gift would help to feed her, educate her, and provide her with health care. A second group was presented with a fact sheet citing statistics regarding food shortages in Malawi and Zambia affecting millions. Still a third group was presented with both the personal story and the statistics. Unsurprisingly, participants gave twice as much to Rokia as they gave in the statistics only condition. What was surprising, and disturbing, is that the third group, the group receiving both personal and statistical information gave only a tiny amount more than those in the statistics only condition (29% compared to 23%), and they gave far less than those who gave to Rokia (29% compared to a whopping 48%). Ariely’s conclusion from this and other similar studies is that statistical information designed to appeal to our reason backfires when it comes to inducing generosity. Numbers and statistics make most people less likely to give rather than more. Ariely’s response to this conclusion is

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<sup>1</sup> Ariely, *The Upside of Irrationality*, Kindle locations 3131-3148.

interesting. Rather than lamenting this failing or vainly trying to change and reform this broken aspect of our humanity, Ariely suggests decision makers must acknowledge this aspect as a given and craft their appeals accordingly.

While Ariely himself eschews theological language, the reality he describes and his response raise the question of whether the behavioral turn accepts sin so that a kind of good-enough grace might abound. Stated clearly: do the limiting heuristics and biases outlined by cognitive theory simply describe human sinfulness? What else can one call the indifferent blindness to thousands while giving excessively to one already privileged child except sin? Since bias so often leads to mistakes, risk management in fields as diverse as engineering to medicine utilizes the study of heuristics and biases to prevent error, a word whose Latin root is connected to sin. Long before Descartes penned *cogito ergo sum*, Augustine wrote, "*Si enim fallor, sum*," meaning, "If I err, or sin, I am."<sup>2</sup> Further, does Ariely's conclusion that decision makers should accept the fact that people simply are not moved by numbers give too much away? Are not Christians called to be different and follow a narrow road? Most significantly, if I have convincingly shown that Jesus' own humanity reflects the same heuristics and biases cognitive theory describes, does a proposed behavioral theology suggest, in contradiction with the Christian tradition, that Jesus himself is not without sin?

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<sup>2</sup> Augustine, *De Civitate Dei: Everyman's Library*, trans. Ernest Barker, ed., R.V.G. Tasker (London: J.M. Dent and Sons, 1944), Book XXI, Chapter XXVI, 335.

These questions hinge on how behavioral theology understands sin. Do heuristics and the resulting biases simply define sin with experimental precision, or is there some other way to understand these phenomena? Scripturally, this question is not easy to answer. Holy Scripture, particularly the Old Testament, contains a rich vocabulary of sin. The New Interpreters Bible commentary notes this richness: “The vocabulary used for problematic behavior within the OT indicates some of the complexity. The most common terms for such behavior are ‘sin’ or ‘missing the mark’ (khatta’th חַטָּאת;), ‘transgression’ (pasha’ פָּשָׁע), ‘iniquity’ (‘awon עוֹן), ‘rebellion’ (meri מִרְיָה), or simply ‘evil’ (ra’ רָע).”<sup>3</sup>

While the notion of חַטָּאת as missing the mark might seem in keeping with heuristics leading to bias and error, the vast majority of the terms for sin in the Old Testament refer not to human error per se, but to unjust, broken relationships and false religion. The prophets in particular reserve their harshest condemnations for a nation and individuals breaking covenant with God by their treatment of the poor. Isaiah, using a broad range of language for sin, laments ‘transgression’, פָּשָׁע; ‘sin’, חַטָּאת; and ‘iniquity’, עוֹן of the people as seen particularly in their oppression of the poor and in the corruption of justice. While the prophets also include hard words for covenant infidelity, Leviticus places the accent on sin as breaking covenant with God in the form of religious

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<sup>3</sup> Harold W. Attridge, “Sin, Sinners,” *New Interpreters Bible Dictionary*, vol. 5, ed. Katherine Doob Sakenfeld (Nashville: Abingdon Press, 2009), 263.

violation. Leviticus offers an extended account of the sacrifices to be offered for 'sin', חטאת. While there is certainly a component of social justice to be found in the Levitical conception of sin, especially justice for the stranger, the greater emphasis in Leviticus falls on sin as violation of religious law: uncleanness from contact with death, blood, and other acts leading to religious pollution.<sup>4</sup> A more thorough analysis of the Old Testament would certainly add greater nuance to the Hebrew understanding of sin, but the conception of sin as lack of human perfect reason or will seems to be almost wholly absent.

Less clear, however, is the understanding of sin in the New Testament. To begin with the vocabulary for sin is more narrow with only three possibilities: 'lawlessness', ἡ ἀνομία; 'evil', ἡ κακός; and, the most well known, 'sin', ἡ ἁμαρτία. Sin as ἡ ἁμαρτία represents an archery metaphor and means to miss the mark. This sense of mistake and error certainly seems consistent with cognitive bias. The difference between the Old Testament and New Testament contexts is that while the Hebrew term חטאת also conveys the meaning of missing the mark, ἡ ἁμαρτία dominates the New Testament vocabulary for sin in a way that חטאת does not in the Old Testament. As in the Old Testament examples, the use of the word ἡ ἁμαρτία in context will offer the best sense of whether the New Testament might link sin with bias.

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<sup>4</sup> Attridge, "Sin, Sinners," *New Interpreters Bible Dictionary*, 267.



The meaning of sin in relationship to Jesus' life and ministry pairs well with the way sin appears in the prophets as Jesus refers to sin both in a social and a religious context. In terms of a social critique Jesus, like the prophets, reserves harsh words for the sins of the elite. Sounding like the prophet in Ezekiel 34 complaining that the priests of his day were like shepherds feasting on their sheep, Jesus goes after the scribes and the Pharisees with gusto. In Matthew 23 Jesus lays out the many sins of the Pharisees: laying heavy burdens on those in their care, loving the appearance of being holy without actually being holy; confusing unimportant matters with weighty matters; and neglecting justice and mercy. Strikingly, in Matthew 23 Jesus also refers to the Pharisees as being like whitewashed tombs that look good on the outside but are full of dead men's bones on the inside. What is important to note is that while the Pharisees are in some sense making mistakes, what Jesus is criticizing is not their imperfect reason or will but their imperfect and unfair treatment of those in their power. In a religious context while Jesus certainly challenges the Levitical understanding of cleanliness on many occasions, Jesus still links sin with illness and the religious establishment of the day. Jesus often links sin with illness and the forgiveness of sin with healing and, in many of these instances, directs the recipient of healing to go and show themselves to the priests. Even in John's Gospel when Jesus heals the man born blind from birth in Chapter 9 and argues that the man was not born blind due to sin, Jesus still links the man's healing to a religious epiphany of demonstrating Jesus as the Christ. While the

concept of sin in the life and work of Jesus is more complicated than what can be presented here, it is enough to point out that when Jesus uses the term ἡ ἁμαρτία, there is no sense that the mark being missed is imperfect reason or will.

Also, sin appears to be subject to volition in Jesus' understanding. After Jesus heals a man on the Sabbath in John 5, he approaches the man saying, "You have been made well! Do not sin any more, so that nothing worse happens to you" (John 5:14). In the floating pericope of John 8 Jesus memorably tells the woman caught in adultery to "Go your way, and from now on do not sin again" (John 8:11). While the theology of Jesus, who never claimed to be a systematic theologian, is mediated through the evangelists, it is clear that in some instances Jesus disagreed with Paul Tillich's existentialist view that the church should think of sin as a state of estrangement rather than an act of disobedience.<sup>5</sup> At times for Jesus ἡ ἁμαρτία was not only an action but also an action subject to human volition. Sin was something people could choose or not.

Such an understanding of sin both in the Old and New Testaments at this point is at odds with a behavioral understanding of heuristics and biases. This point of volition is particularly significant. The heuristics and biases that shape human cognition are not subject to volition. Simply knowing that humans are subject to confirmation bias does not mean they will not continue to seek out information that supports the position

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<sup>5</sup> Paul Tillich, *Systematic Theology Vol. II The Existence and The Christ* (Chicago: University of Chicago Press, 1957), 46.

with which they already agree. Behavioral theorists liken heuristics and biases to optical illusions in which people's minds can intellectually understand that their eyes are being misled, but this information fails to change the fact that their eyes continue to be misled.

So, up to this point it is possible to argue that being shaped by cognitive limitations should not be understood as being sinful. Being shaped by cognitive limitations means we are fully human, and fully human means we are finite. While we can accept the fact that this finitude means that our culture, gender, and social class color our perceptions of the world, behavioral theory means that we have to add cognitive limitations to this list of conditioning factors as well. Being biased by itself is not sinful, but deceiving ourselves that we could somehow mentally or spiritually form ourselves to be beyond heuristics and biases might well be. One of the most traditional understandings of sin is hubris or pride. Hubris is the sin of trying to reach beyond humanity to barnstorm the kingdom of God. Sin, behavioral theology could argue at this point, is not being biased. Sin, then, is willfully failing to adjust for these ever-present biases, perhaps out of pride (thinking *others* might be biased, but *we* are not) or out of simple sloth.

However, with the Apostle Paul, the picture of sin in the New Testament changes dramatically. While Paul joins with other Hellenistic moralists of the times by sometimes simply generating lists of do's and sinful don'ts, Paul also offers the most sophisticated theological treatment of sin in the New Testament. Particularly in Romans,

Paul expands the sense of sin as being a social or religious violation to sin being something more approaching a state of being. Quoting sections of the Psalms, Paul establishes that sin means to fall short of the glory of God, something shared by Jews and Greeks alike in his view. Paul builds his hamartiology to a climax in Romans 7 in which he shows that while the law is good, it is insufficient due to the weakness of human flesh. Paul ostensibly argues that sin is a fundamental weakness of human nature, inherited through Adam, in which the human being can know the good but is unable to will the good. What could be more poignant than Paul's description of the sinful human condition: "I can will what is right, but I cannot do it. For I do not do the good I want, but the evil I do not want is what I do. Now if I do what I do not want, it is no longer I that do it, but sin that dwells within me" (Romans 7:18b–20).

This powerful, sweeping view of sin in Paul poses a challenge to a behavioral theological understanding of heuristics and biases. While the majority of the biblical witness does not view sin as a human condition that impairs human reason and will, Paul develops this idea in a way that certainly makes it sensible to view imperfect human reason and will as sin itself. In Paul's understanding of sin "the fundamental character of human nature, 'the flesh' ... is beset by the force of passionate desire that overcomes the rational recognition of what is right."<sup>6</sup> In this conception of sin heuristics and biases offer evidence of sin even if they are not viewed as sin itself. And, as

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<sup>6</sup> Attridge, "Sin, Sinners," *New Interpreters Bible Dictionary*, 277.

previously discussed, viewing heuristics and biases as sin rather than as full humanity represents an enormous challenge to a behavioral theological argument that the church needs to learn more about cognitive limitations and make changes in light of them. As a further complication to behavioral theology, Paul's notion of sin as this state of imperfect will gets picked up and developed by Calvin.

An astute observer of the human condition, Calvin lamented the condition of human perception in a statement with which any behavioral theorist could agree: "For if it is considered disgraceful for us not to know all that pertains to the business of human life, even more detestable is our ignorance of ourselves, by which, when making decisions in necessary matters, we miserably deceive and even blind ourselves."<sup>7</sup> Self-deception and blindness are precisely the problems that behaviorists argue mark human decision making. Moreover, before any psychologist came up with the term 'optimism bias', Calvin had already observed that this behavior is endemic to humanity: "There is, indeed, nothing that man's nature seeks more eagerly than to be flattered. Accordingly, when his nature becomes aware that its gifts are highly esteemed, it tends to be unduly credulous about them. It is thus no wonder that the majority of men have erred so perniciously in this respect. For since blind self-love is innate in all mortals, they are most freely persuaded that nothing inheres in themselves that deserves to be

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<sup>7</sup> John Calvin, *Institutes of the Christian Religion: Volumes XX and XXI The Library of Christian Classics*, trans. Ford L. Battles, ed. John T. McNeil (Philadelphia: Westminster, 1960), II.i.1.

considered hateful.”<sup>8</sup> Five hundred years before Sunstein and Thaler wryly pointed out how most people believe themselves to be above average, Calvin already recognized how easy it is for humans to believe in themselves and how difficult it is for humans to be persuaded that anything inheres in them that might be considered less than wonderful.

Calvin raised objections to the optimistic anthropologies he saw in two schools of thought influential in his day: humanistic philosophy and Thomist Roman Catholic theology. Where the philosophers held an elevated view of human reason, the Roman Catholic theology of Calvin’s day emphasized human will. Calvin held a dim view of both. “This [error] we observe has happened to certain philosophers, who, while urging man to know himself, propose the goal of recognizing his own worth and excellence. And they would have him contemplate in himself nothing but what swells him with empty assurance and puffs him up with pride.”<sup>9</sup> Even more pointedly, Calvin argues that the philosophers sought in vain when they looked to humanity for a model to define reason and rationality: “Hence the great obscurity faced by the philosophers, for they were seeking in a ruin for a building, and in scattered fragments for a well-knit structure.”<sup>10</sup> While grateful for the humanist renaissance of classical study providing a

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<sup>8</sup> Calvin, *Institutes of the Christian Religion*, II.i.2.

<sup>9</sup> Calvin, *Institutes of the Christian Religion*, II.i.1.

<sup>10</sup> Calvin, *Institutes of the Christian Religion*, I.xv.8.

method, *ad fontes*, to recover crucial elements of the early faith, Calvin resists a humanist spirit that would make of the human the center of all things.

At the same time as Calvin worked to fence out an overestimation of human reason present in the philosophical spirit of the age, Calvin equally resisted the optimism he saw present in the Scholastic theology of the church. In particular Calvin objected to the notion of cooperative grace articulated by Peter Lombard: “The Master of the Sentences meant to settle this point when he taught: ‘We need two kinds of grace to render us capable of good works.’ He calls the first kind ‘operating,’ which ensures that we effectively will to do good. The second he calls ‘co-operating,’ which follow the good will as a help ... while he attributes the effective desire for good to the grace of God, yet he hints that man by his very own nature somehow seeks after the good—though ineffectively.”<sup>11</sup> Quoting from Augustine against this elevation of human will, Calvin writes that human will is free only to prevent blaming sin on God: “Only let no one so dare to deny the decision of the will as to wish to excuse sin.”<sup>12</sup> Yet for Calvin, human will is only truly free to choose the good when the Spirit of the Lord is present.<sup>13</sup> To claim anything more for the will is to “usurp God’s honor, and thus become guilty of monstrous sacrilege.”<sup>14</sup> By sacrilege, Calvin means what is at stake is nothing less than a

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<sup>11</sup> Calvin, *Institutes of the Christian Religion*, II.ii.6.

<sup>12</sup> Calvin, *Institutes of the Christian Religion*, II.ii.8.

<sup>13</sup> Calvin, *Institutes of the Christian Religion*, II.ii.8.

<sup>14</sup> Calvin, *Institutes of the Christian Religion*, II.ii.10.

complete understanding of salvation by grace itself: who needs grace when they have enough will power to make a choice for Christ?

To be fair as dim as Calvin appears to be regarding human reason and will, he is not as dour as one might expect. Calvin acknowledges that hints and fragments of reason and will remain in humanity: “In short, the many pre-eminent gifts with which the human is endowed proclaim that something divine has been engraved upon it; all these are testimonies to an immortal essence.”<sup>15</sup> Further, Calvin describes the workings of the human mind as being often capable of “nimbleness in searching out heaven and earth and the secrets of nature.”<sup>16</sup> Indeed, Calvin grants that a glimmer of God’s image remains in humanity and that “God’s image was not totally annihilated and destroyed in him.”<sup>17</sup> The problem, according to Calvin, is that while glimmers and traces of reason and will remain in humanity, they are nothing compared to what they once were before the Fall and what they are as viewed in the restoration of humanity embodied in Jesus Christ.

Calvin’s anthropology relies entirely on a strong and all-encompassing view of the Fall: “We cannot have a clear and complete knowledge of God unless it is accompanied by a corresponding knowledge of ourselves. This knowledge of ourselves is twofold: namely, to know what we were like when we were first created and what our

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<sup>15</sup> Calvin, *Institutes of the Christian Religion*, I.xv.2.

<sup>16</sup> Calvin, *Institutes of the Christian Religion*, I.xv.2.

<sup>17</sup> Calvin, *Institutes of the Christian Religion*, I.xv.4.



condition became after the fall of Adam.”<sup>18</sup> In Adam Calvin argues that reason and will were intact: “Man in his first condition excelled in these pre-eminent endowments, so that his reason, understanding, prudence, and judgment not only sufficed for the direction of his earthly life, but by them men mounted up even to God and eternal bliss.”<sup>19</sup> Calvin exceeds even the philosophers and the poets in his exultation of human capacity, except that Calvin is praising humanity in what he sees as a ‘first condition’: a hypothetical perfectly rational being who existed before the Fall. In this sense Calvin argues that originally humanity did not suffer from limiting heuristics and predictable blind spots generated by biases, while at the same time observing that in his day gross irrationality abounded.

What keeps Calvin’s anthropology from being tragic is Jesus Christ. While christologically Calvin views Jesus as fully God and fully human, one senses a certain anxiety regarding Jesus’ humanity as it pertains to his divinity. Refuting what he calls the Manichaeian error of claiming too strong a link between God’s nature and humanity, Calvin writes: “For if man’s soul be from the essence of God through derivation, it will follow that God’s nature is subject not only to change and passions, but also to ignorance, wicked desires, infirmity, and all manner of vices. Nothing is more inconstant than man. Contrary motions stir up and variously distract his soul. Repeatedly he is led

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<sup>18</sup> Calvin, *Institutes of the Christian Religion*, I.xv.1.

<sup>19</sup> Calvin, *Institutes of the Christian Religion*, I.xv.1.

astray by ignorance. He yields, overcome by the slightest temptation. We know his mind to be a sink and lurking place for every sort of filth. All these things one must attribute to God's nature, if we understand the soul to be from God's essence ... who would not shudder at this monstrous thing?"<sup>20</sup> By acknowledging that humanity is made in God's image, Calvin is not saying one can look at humanity and discover God. A trace of the image remains, but the fallen human being is too marked by Calvin's unpleasant list of attributes to discern God in humans. But, what of Jesus? What of his humanity? If one claims that Jesus is fully human and fully divine, does one involve God in error and filth? Is one saying a monstrous thing?

Calvin avoids this difficulty by viewing Jesus as being fully human, yes, but not bearing a humanity tainted by the Fall. Jesus Christ, to Calvin, represents true humanity as it existed before the Fall: "Consequently, the beginning of our recovery of salvation is in that restoration which we obtain through Christ, who also is called the Second Adam for the reason that he restores us to true and complete integrity."<sup>21</sup> Therefore, all of the qualities of perfect reason, understanding, and will that Calvin attributes to humanity in the first state before the Fall Calvin attributes to Jesus Christ's humanity. In this way Calvin is able to affirm Christ's divinity and at the same time safeguard God's majesty from humanness by claiming that Jesus' humanity is not really equivalent to observable

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<sup>20</sup> Calvin, *Institutes of the Christian Religion*, I.xv.5.

<sup>21</sup> Calvin, *Institutes of the Christian Religion*, I.xv.4.

humanity after the Fall. Calvin admits to Christ bearing some marks of humanity: Christ is born of a woman, and is “subject to hunger, thirst, cold, and other infirmities of our nature.”<sup>22</sup> And yet, Calvin maintains that in Christ’s virgin birth Jesus was so sanctified by the Holy Spirit that he “might be pure and undefiled as would have been true before Adam’s fall.”<sup>23</sup>

To sum up a Calvinist view of cognitive limitations then, heuristics and their resulting biases stem from the fallen nature of humanity. Before the Fall men and women perfectly reflected the image of God and as such were endowed with perfect reason, understanding, and will. Then, as a result of the Fall, the marred image of Adam blemished all of humanity. Thus, humanity may be said to have some reason and will, but ultimately these faculties are systemically and fatally flawed. In this sense the behavioralists of today should be viewed from the perspective of Calvin as merely sketching out the defects of sin. These heuristics and biases describe, in other words, the sinful division Paul describes between the human capacity to know the good and the inability to do the good. The Apostle Paul describes the body of sin: “I can will what is right, but I cannot do it. For I do not do the good I want, but the evil I do not want is what I do” (Romans 7:18b–19). The lists of heuristics and biases in this view are akin to the catalogue of demons the desert fathers and mothers collected in the Egyptian

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<sup>22</sup> Calvin, *Institutes of the Christian Religion*, II.xiii.1.

<sup>23</sup> Calvin, *Institutes of the Christian Religion*, II.xiii.4.

wilderness. While the behavioralists should be applauded for their honest, humble acknowledgment of human fallibility, the behaviorist view regarding the permanence of these failures and guidance regarding just accepting these biases would be deeply suspect from a Calvinist conviction.

If, then, heuristics and biases describe sin, the consistent argument from behavioral theorists that one must just accept these heuristics and biases as givens appears to accept the defeat of sin rather than living in joyous, proleptic anticipation of the victory of Christ. In this view a behavioral theology might have descriptive but not prescriptive value: behavioral theology might be helpful in identifying and predicting areas of brokenness with a high degree of accuracy, but then spiritual disciplines such as common worship, prayer, and devotional reading should be engaged to heal these twisted, defective aspects of human nature. Thus, by the power of the Holy Spirit humans might be conformed more by the will of God than by their biases. Moreover, as I have tried to show, a behavioral description of Jesus regardless of its explanatory value must be rejected as standing in contradiction to Paul's view of Christ: "For our sake he made him to be sin who knew no sin" (Second Corinthians 5:21) and the perspective of the author of Hebrews: "For we do not have a high priest who is unable to sympathize with our weaknesses, but we have one who in every respect has been tested as we are, yet without sin" (Hebrews 4:15).

Fortunately for the prospect of behavioral theology, while Calvin's two-state solution may solve Calvin's dilemma over whether God could take flesh without fully assuming the fallen human condition, Calvin's solution comes at the cost of God's freedom and Christ's full humanity. Karl Barth's respectful critique of Calvin's anthropology outlines a God freely capable of assuming humanness in all its brokenness merely because God is God and delineates a fully human Jesus in whom God and humanity become partners. Barth's emphasis on the divine initiative and his acknowledgment that limitation is not sin frees behavioral theology to understand cognitive systems, heuristics, and biases not as sin but as the finitude, the limitation, of full humanity. While it is challenging to accept that human ability to perceive the world is limited and conditioned by cognitive processes, these limiting processes are not sinful in and of themselves. Barth will also offer a pathway to see that while human finitude is not sin, how humans respond to this finitude may well be.

First, an acknowledgment must be made that Barth may initially seem like an unusual choice for a theology seeking to relate the Christian tradition to social science. After all, it is Barth who responded to Bruner's mild attempt at a chastened natural theology with his famous "Nein!" It is Barth who describes the entirety of nineteenth century theology as "religionistic, anthropocentric, and in this sense humanistic ... to

think about God meant to think in a scarcely veiled fashion about man.”<sup>24</sup> Wolf Krotke is correct to write: “For Barth, in fact, means that if we want to know who and what the human being is, we are not in the first place to look to ourselves. Nor are we to begin with what the empirical sciences say about the human being; nor are we to orient ourselves to the phenomena of human existence past and present in an attempt to interpret the experiences which are there expressed.”<sup>25</sup> To be sure Barth himself would have had little if any interest in what behavioral theory has to say about humanity, at least as a *primary* source of constructing a theological anthropology. However, the word primary is key. While Barth’s theology itself is not behavioral in any sense of the term, his critique of Calvin and Barth’s understanding of what he calls “the humanity of God” open a pathway in which the church can primarily understand anthropology stemming from God’s desire to be with and for humanity. Secondly, the church can freely turn to social science for additional insight into the particularity of the human experience.

While brimming over with respect for “Master Calvin,” Barth offers not only a critique of Calvin’s understanding of predestination, but Barth offers an explicit correction to Calvin’s Christology and anthropology as well. Barth’s main challenge to Calvin’s anthropology is Calvin’s starting point. Understandably, Calvin starts his investigation of anthropology with humanity: “We must now speak of the creation of

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<sup>24</sup> Karl Barth, *The Humanity of God*, trans. John Newton Thomas and Thomas Wieser (Philadelphia: John Knox Press, 1960), 39.

<sup>25</sup> Wolf Krotke, *The Humanity of the Human Person in Karl Barth’s Anthropology: The Cambridge Companion to Karl Barth*, ed. John Webster (Cambridge: Cambridge University Press, 2000), 159.

man ... this knowledge of ourselves is twofold: namely, to know what we were like when we were first created and what our condition became after the fall of Adam."<sup>26</sup> While starting with humans to understand humanity seems like a sensible beginning, Barth attacks this approach again and again insisting that the only starting place for theological anthropology is with God in Jesus Christ: "The ontological determination of humanity is grounded in the fact that one man among all others is the man Jesus. So long as we select any other starting point for our study, we shall reach only the phenomena of the human."<sup>27</sup> Calvin's anthropological starting point is human beings: specifically the dual nature of humans pre and post Fall. By changing the starting point, Barth opens up octaves of possibility closed to Calvin.

Specifically, when Jesus Christ is the starting point in understanding humanity, then the good news of grace is the ultimate frame as opposed to the judgment of the fall. Wolf Krotke interprets: "In the man Jesus, the eternal triune God has elected all human beings as his covenant partners in a free act of the overflowing of his love."<sup>28</sup> In this grace and because of God's divine freedom Barth sees no essential conflict between the divine and the human as does Calvin. Because God is God to Barth, God can freely assume humanity without in any way compromising God's nature, which is love and freedom: "God's deity is thus no prison in which He can exist only in and for Himself. It

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<sup>26</sup> Calvin, *Institutes of the Christian Religion*, I.xv.1.

<sup>27</sup> Barth, *Church Dogmatics Vol. III: The Doctrine of Creation, Part 2*, 132.

<sup>28</sup> Krotke, *The Humanity of the Human Person in Karl Barth's Anthropology*, 163.

is rather His freedom to be in and for Himself but also with and for us, to assert but also to sacrifice Himself, to be wholly exalted but also completely humble, not only almighty but also almighty mercy, not only Lord but also servant, not only judge but also Himself the judged, not only the man's eternal king but also his brother in time. And all that without in the slightest forfeiting His deity!"<sup>29</sup>

Moreover, because of this divine freedom, there is no tension between God and humanity, and there is no tension in the person of Jesus Christ between Christ's divinity and his full humanity. While Calvin offers a vision of postlapsarian Jesus so perfect in reason and will as to be scarcely recognizable as a human being, Jesus Christ in Barth's view is fully human in every way: "Is it not true that in Jesus Christ, as He is attested in the Holy Scripture, genuine deity includes in itself genuine humanity? There is the father who cares for his lost son, the king who does the same for his insolvent debtor, the Samaritan who takes pity on the one who fell among robbers and in his thoroughgoing act of compassion cares for him in a fashion as unexpected as it is liberal. And this is the act of compassion to which all these parables as parable of the Kingdom of heaven refer. The very One who speaks in these parable takes to His heart the weakness and the perversity, the helplessness and the misery, of the human race surrounding Him. He does not despise men, but in an inconceivable manner esteems

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<sup>29</sup> Barth, *The Humanity of God*, 49.



them highly just as they are, takes them into His heart and sets Himself in their place.”<sup>30</sup>

Barth is also careful to point out that God’s assumption of full humanity is not only in keeping with God’s majesty, but it maintains the authentic nature of humanity.

Describing what happens in baptism when the baptized dies to self and rises in Christ, Barth views the new creature as “not engulfed and covered as by a divine landslide or swept away as by a divine flood.”<sup>31</sup>

What is sin, then, for Barth? In his characterization of sin Barth veers the furthest from Calvin. For Barth sin is not a lack of perfect reason, understanding, and will exhibited by a second, post-Fall humanity. For Barth, as for Augustine, sin is nothingness, an “ontological impossibility.” Wolf Krotke expands on Barth’s position: “Over against this, everything sinful in human being is without meaning or ground. It cannot be derived either from God’s determination of the human or from God’s conduct toward the human. It has no ground whatsoever. It is absurd. That is why it does not belong in an anthropology that deals with God’s elected, ontologically good creature.”<sup>32</sup> For Barth, then, sin is not a lack of human perfection compared to the light of Jesus Christ or some kind of imagined pre-Fall existence. Sin is the human freedom to respond to God’s desire for partnership, the divine Yes, with a sad, meaningless no. This no is

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<sup>30</sup> Barth, *The Humanity of God*, 51.

<sup>31</sup> Karl Barth, *Church Dogmatics Vol IV: The Doctrine of Reconciliation, Part 4*, trans. H. Knight, G.W. Bromiley, J.K.S. Reid, and R.H. Fuller, eds. G.W. Bromiley and T.F. Torrance (Peabody, MA: Hendrickson Publishers, 2010), 163.

<sup>32</sup> Krotke, *The Humanity of the Human Person in Karl Barth’s Anthropology*, 165.

meaningless because the human no can never negate God's divine Yes, which provides the very ground of human existence. Further, sin is also hubris to Barth. Whereas Christ emptied himself taking the form of a slave, human sin rejects this freely chosen limitation; humans choose instead a false, Promethean understanding of freedom. God's freedom in Jesus Christ is the freedom to love; and because of this freedom to love, Jesus Christ freely accepts the limitations and finitude of human creatureliness. Human sin *qua* hubris rejects the very idea of limitation, wanting to assert itself against every possible line. Barth's devastating critique against the human desire to elevate itself without the help of God, no doubt aimed at the Romantic liberalism of his youth, seems incredibly consistent with the behavioral insistence that humans are often less aware of what is motivating them and their thinking than they know.

Ultimately, Barth's theological anthropology offers such a contrast to Calvin's understanding that Barth could only lament, if somewhat humorously, over Calvin's half measures: "It is when we look at Jesus Christ that we know decisively that God's deity does not exclude, but includes His humanity. Would that Calvin had energetically pushed ahead on this point in his Christology, his doctrine of God, his teaching about predestination, and then logically also in his ethics! His Geneva would then not have become such a gloomy affair. His letters would then not have contained so much

bitterness.”<sup>33</sup> Barth’s correction to Calvin’s unduly complicated two-state vision of humanity that links sin with human imperfection frees behavioral theology from having to understand heuristics and biases as sin. In a Barthian anthropology the human being finds primary expression in the meeting between the divine and the human in the person of Jesus Christ. God in God’s freedom elects to partner with humanity in the person of Jesus Christ, and this partnership impinges neither on God’s majesty nor on the creatureliness of genuine humanity. Unlike Calvin’s Christ, who is fully God and only vaguely recognizable as a human being, Barth’s Christ is fully God and fully human. Barth frees us to understand the heuristics and biases described by behavioral theorists not as broken aspects of human sinfulness but as facets of our full humanity.

I would also argue that Barth’s anthropology does not merely counter Calvin but creates a kind of space in which behavioral theology might sketch out a connection between a theological understanding of humanity and a behavioral understanding of humanity. There are aspects of deep resonance between the two views, as disparate as they appear on the surface. Barth’s extreme pushback against humanist optimism, as noted in the earlier discussion of Barth’s view on pride, is shared by the behavioralist turn. One of the most challenging and invigorating aspects of Barth’s theology and behavioral theory is his bracing attack against human ability. Writing from a twenty-first

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<sup>33</sup> Barth, *The Humanity of God*, 49.

century North American context in which human will power is all but deified, Barth's consistent shift away from the human feels right at home with the humility expressed in behavioral thinking. To be sure Barth rightly reminds us that any theological anthropology must start with Jesus Christ and God's partnership with humanity in the person of Christ and not with social science or history. But, Barth was no anti-intellectual, either. Barth acknowledged the role of the sciences provided they did not usurp the divine initiative. In this way Barth not only leaves space for a behavioral theology but also offers a helpful framework to keep such a project from falling into humanist error.

## 6. Correcting Practical Docetism: A Behavioral Practical Theology

Church leaders should notice that something really interesting is at work in the behavioral critique of instrumental rationality. The behavioral critique represents a shift in anthropology, which occurred as researchers grew increasingly aware that their neglect of full humanity jeopardized the validity of their predictive models. The church has traveled a similar road. In one of the earliest misunderstandings of Jesus Christ second century Bishop Serapion grew concerned about something he called Docetism after reading the Gospel of Peter being used by the church in Rhodus.<sup>1</sup> While the talking cross in the Gospel might have raised a few eyebrows, what concerned Serapion most was the fact that on the cross The Gospel of Peter states that Jesus “felt no pain.”<sup>2</sup> Docetism, from the Greek δοκέω, meaning to seem, claims Jesus was not truly human, but only appeared to be human. This belief appeals to believers then and now. What could be better than to get rid of the messiness and weakness of the flesh? As already noted, this temptation to lift up Christ’s spirit and mind and deny his humanness was ruled out by the church at Nicaea in 325. Without the fleshy-ness of Christ, the humanity of Christ, the fundamental connection between God and humanity through the God-

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<sup>1</sup> John Arendzen, “Docetae,” *The Catholic Encyclopedia*, vol. 5 (New York: Robert Appleton Company, 1909), 13, accessed January 9, 2014, <http://www.newadvent.org/cathen/05070c.htm>.  
<http://www.newadvent.org/cathen/05070c.htm>.

<sup>2</sup> Raymond Brown, trans., “The Gospel of Peter,” accessed January 9, 2014, <http://www.earlychristianwritings.com/text/gospelpeter-brown.html>.

man, Jesus Christ, is lost. It is not hyperbole to suggest that on that connection rests all.

As Gregory of Nazianzus put it: "That which is not assumed is not healed."<sup>3</sup>

And yet, to borrow and modify a concept from Ken Carder and Lacey Warner, for all of our history with Docetism, the church today suffers at times from a kind of 'practical Docetism', especially in the way the church trains leaders. Carder and Warner in *Grace to Lead* lament the habit of church leaders when planning for the future to slip into a kind of 'practical atheism', wrongly thinking that the future of the church depends on human strategic thinking alone rather than the outpouring love of the triune God.<sup>4</sup> While their point is well taken that faithful ecclesial leaders must ground their decision making in the love and grace of God, a behavioral theology would add that faithful leaders also need to make decisions in light of an adequate theological anthropology encompassing our full humanity. Without an adequate theological anthropology, church leaders, like classical economists, unreflectively ascribe greater rationality to church leaders and church members than behavioral theorists have demonstrated is present. Rather than the econs of Sunstein and Thaler, though, practical Docetism assumes 'theologicons', entirely rational church members unswayed by emotion, unaffected by behavioral blind spots, and able to renew their minds without serious attention to their brains or bodies. Such training may be not merely unhelpful but professionally

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<sup>3</sup> Hardy, *Christology of the Later Fathers*, 218.

<sup>4</sup> Ken Carder and Lacey Warner, *Grace to Lead: Practicing Leadership in the Wesleyan Tradition* (Nashville, TN: General Board of Higher Education and Ministry of the United Methodist Church, 2011), 11.

damaging to those called to lead. Michael and Deborah Jenkins sense this: “Over a combined experience of almost forty years of leadership and study in nonprofit organizations ... we have become convinced that many of the things that leaders in these institutions are taught in professional schools may actually work against their effective leadership and that their highest ideals may compound the problem.”<sup>5</sup>

A behavioral theology challenges the current practical Docetism and suggests that churches direct attention to four areas: the practice of theological and scriptural reflection; decision making; the role of a pastor; and the cultivation of an experimental spirit in the church. When it comes to theological and scriptural reflection, behavioral theology reminds the church that reason alone will not be sufficient because fully human church leaders, like all leaders, are subject to cognitive limitations such as confirmation bias, which steers leaders to focus more on information that confirms their beliefs and blinds them to disconfirming information. Regarding decision making, many church leaders already intuitively know and follow some of the recommendations from behavioral theorists when making important decisions. For instance, many pastors intuitively know that even small changes can feel painful to the people in their care even if they are not familiar with the formal concepts of status quo bias and loss aversion. Articulating a decision-making process guided by a more realistic theological

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<sup>5</sup> Michael Jenkins and Deborah Shaw Jenkins, *The Character of Leadership: Political Realism and Public Virtue in Nonprofit Leadership* (San Francisco: Jossey-Bass, 1998), 1.

anthropology, however, will help congregational leaders and the churches they serve avoid some common pitfalls created by predictable irrationality. Behavioral theology offers guidance for how leaders might understand their role, suggesting that leaders begin to view themselves more as ‘choice architects’ responsible for creating space in which human beings can discern the Holy Spirit rather than deciders responsible alone for determining God’s will for the congregations they lead. Finally, one of the hallmarks of behavioral economics is the reliance upon testing theories with actual living human beings and amending theories based on the findings. Behavioral theology suggests that in conjunction with thoughtful theological and scriptural reflection, church leaders should add regular experimentation to their tools to discern where God’s spirit is leading.

### ***Theological and Scriptural Reflection***

Some church leaders articulate what feels like a disconnect between academic theology and the practice of ministry. Seminarians often complain that academic training is not practical enough, and scholars rightly, if at times defensively, respond that faithful ministry today is more complicated than any set of techniques can possibly address. A behavioral perspective suggests that both sides of this debate have a point. In order to take into account a more complicated anthropology, behavioral econometric models grew more rigorous than classical economics. In other words rather than simplifying or watering down rigor, behavioral economics became more rigorous even



as it helped economics as a discipline become more practical. In the same way a behavioral theology holds that theological training needs to continue to be as theologically rigorous as possible with no decrease in the amount of time seminarians spend learning church history, systematic theology, ancient languages, and biblical interpretation. A behavioral theology adds to this rigorous study a more complicated understanding of our full humanity, taking into account how cognitive limitations can affect both teacher and student alike.

In his 2001 essay “Biblical Authority” Walter Brueggemann offers an excellent example of what this blend of rigorous theological study with a more realistic theological anthropology looks like:

We are seldom aware of or honest about the ways in which our work is shot through with distorting vested interests. But it is so, whether we know it or not. There is no interpretation of scripture (nor of anything else) that is unaffected by the passions, convictions and perceptions of the interpreter. Ideology is the self-deceiving practice of taking a part for the whole, of taking “my truth” for the truth, of palming off the particular as a universal. It is so already in the text of scripture itself as current scholarship makes clear, because the spirit-given text is given us by and through human authors. It is so because spirit-filled interpretation is given us by and through bodied authors who must make their way in the world—and in making our way, we humans do not see so clearly or love so dearly or follow so nearly as we might imagine.<sup>6</sup>

Without using the language of confirmation bias, Brueggemann describes the mechanism of confirmation bias that afflicts the scholar every bit as much as the person reading the Bible for the first time. Vested interests color what humans notice in

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<sup>6</sup> Walter Brueggemann, “Biblical Authority: A Personal Reflection,” *The Christian Century* 118, no. 1 (2001), 18.

scripture and in the theological tradition. Aware of what the self notices but unaware of the bias coloring what the self sees, it is all too easy to believe that one's theological position is reasoned and grounded, while an opposing perspective is merely emotional and grounded in nothing more than an opponent's wishful fantasy. A scholar influenced by behavioral theology will assume that their theological perspective and biblical interpretation is interested and biased accordingly. While liberation and feminist hermeneutics have raised awareness regarding the role that socio-economic status, sex, and race play in our ability to read with awareness, behavioral theology further expands the understanding of bias by adding cognitive biases to the list.

An example of a scholar aware of his own confirmation bias, Daniel Kahneman questioned whether he himself might be subject to the 'halo effect' when grading students. Did he form an opinion of a student based on their previous work and performance and grade their subsequent work more or less highly as a result? Asking students to write two essays for their final exams, Kahneman remembered telling them that both essays counted equally. But did they? Instead of reading both essays and grading them at the same time Kahneman adopted a new procedure: he read all of the first essays and graded them. Then, without looking at the names he graded the second essays removing some of the likelihood that he would read the second essay through the lens of the first:

Soon after switching to the new method, I made a disconcerting observation: my confidence in my grading was now much lower than it had been. The reason was

that I frequently experienced a discomfort that was new to me. When I was disappointed with a student's second essay and went to the back page of the booklet to enter a poor grade, I occasionally discovered that I had given a top grade to the same student's first essay. I also noticed that I was tempted to reduce the discrepancy by changing the grade that I had not yet written down, and found it hard to follow the simple rule of never yielding to that temptation. My grades for the essays of a single student often varied over a considerable range. The lack of coherence left me uncertain and frustrated. I was now less happy with and less confident in my grades than I had been earlier, but I recognized that this was a good sign, an indication that the new procedure was superior. The consistency I had enjoyed earlier was spurious; it produced a feeling of cognitive ease, and my System 2 was happy to lazily accept the final grade. By allowing myself to be strongly influenced by the first question in evaluating subsequent ones, I spared myself the dissonance of finding the same student doing very well on some questions and badly on others.<sup>7</sup>

Kahneman, a Nobel laureate who could easily believe that understanding heuristics and biases might have made him immune to their effects, put himself to the test regarding his own ability to do something as easy and common as grading an essay. His discovery confirms what Jesus knew regarding the Pharisees: how easy it is to teach what oneself is unable to practice. Behavioral theologians will be the first teachers to assume they are biased and will subject their own views and judgments to the test. While the seminarian hoping to avoid reading Karl Barth in favor of something that seems more practical might be disappointed to learn that behavioral theology will not spare them from this hard work, ultimately they will find nothing is more practical than ceasing to behave as if education results in perceiving the world without bias.

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<sup>7</sup> Kahneman, *Thinking, Fast and Slow*, 83-84.

## ***Decision Making***

In addition to this increased sense of humility regarding biblical interpretation and theological reflection, behavioral theology offers congregational leaders valuable insight into the decision-making process. In addition to the impressive theologically informed tradition of discernment, behavioral theology encourages conversation with proponents of decision theory as well. Decision theory, a wide-ranging interdisciplinary study, includes scholars informed by the standard model of rationality such as Stanford's Strategic Decision and Risk Management (SDRM) as well as those more sensitive to the impact of cognitive heuristics and biases such as *Decisive* authors Chip and Dan Heath.

Offering a robust model for decision makers in highly complex organizations, leaders in the SDRM center underscore how good decisions are entirely distinct from good outcomes. Leaders can make a terrible decision and luck into a good outcome; conversely leaders can make a wise decision and suffer a poor result.<sup>8</sup> Practically grounded, SDRM asks leaders to assess how much time to spend on a decision based on the complexity of the organization and the analytical difficulty posed by the decision; simple decisions can be made quickly using common sense while more complicated decisions require greater levels of devotion.<sup>9</sup> SDRM provides leaders a helpful series of

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<sup>8</sup> Peter McNamee and John Celona, *Decision Analysis for the Professional*, 4th ed. (Menlo Park, CA: SmartOrg, 2001), 41.

<sup>9</sup> McNamee and Celona, *Decision Analysis for the Professional*, 225.

assessment guidelines for the decision-making process: appropriate framing, the existence of creative and doable alternatives, well-articulated values, logical thinking that is aware of cognitive bias, and commitment to action.<sup>10</sup>

In helpful contrast Chip and Dan Heath offer a decision-making model more sensitive to behavioral concerns in a way that complements the rationalist decision quality model. In *Decisive* Chip and Dan Heath argue nearly all decisions occur in four stages: decision makers formulate options; they analyze options; they make a choice; and finally they live with this choice.<sup>11</sup> Whereas proponents of decision quality include testing for bias as a single step, the Heaths helpfully note that common biases afflict decision makers at every stage. Referring to these biases as the four villains of decision making, the Heaths highlight how narrow framing limits options, confirmation bias compromises analysis, short-term emotion impedes the ability to decide, and optimism bias blinds one to the need to reassess a decision.<sup>12</sup> Responding to these common traps, the Heaths offer a comprehensive process they refer to as WRAP, which stands for: Widen your options; Reality test your assumptions; Attain distance before deciding; and Prepare to be wrong.<sup>13</sup> By synthesizing SDRM's decision quality model with the Heath's deep sense for cognitive bias, behavioral theology offers congregational leaders a practical way to en flesh theological discernment in wise decisions. In no particular order

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<sup>10</sup> McNamee and Celona, *Decision Analysis for the Professional*, 256-261.

<sup>11</sup> Heath and Heath, *Decisive*, Kindle location 289.

<sup>12</sup> Heath and Heath, *Decisive*, Kindle locations 294-298.

<sup>13</sup> Heath and Heath, *Decisive*, Kindle locations 366-388.

this model suggests that church leaders making good decisions will prayerfully consider scope being mindful of optimism bias, craft alternatives by avoiding narrow framing, stay centered on core values as a way of overcoming the churn of short term emotion, analyze options based on sound information aware of confirmation bias, and commit to action in light of loss aversion.

Both SDRM and the Heaths address primarily for-profit business ventures. The goals and decision-making environments of these organizations often vary considerably from the church; however, the processes outlined have great value for church leadership teams. Rich discernment practices like the Ignatian *examen* help leaders assess their own spiritual and mental states during the decision making process.<sup>14</sup> Practices like the Quaker clearness committee can help decision makers sense the tug of God's Spirit in the midst of the decision-making process.<sup>15</sup> Robust decision frameworks such as the process adopted by the Uniting Churches in Australia can help large deliberative bodies merge spiritual discernment with Robert's Rules of Order.<sup>16</sup> Thus, the proposed behavioral theological synthesis does not replace spiritual practices the church has relied on for centuries. Rather, this model aims to help church leaders move from the sense of

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<sup>14</sup> Elizabeth Liebert, *The Way of Discernment* (Louisville, KY: Westminster John Knox Press, 2010), Kindle location 312, Kindle.

<sup>15</sup> Suzanne Farnham et al., *Listening Hearts: Discerning Call in Community, 20<sup>th</sup> Anniversary Edition* (New York: Morehouse Publishing, 1991), Kindle locations 639-640, Kindle.

<sup>16</sup> The Uniting Church in Australia, "A Manual for Meetings," accessed January 9, 2014, [http://wr.victas.uca.org.au/assets/637/Manual\\_for\\_Meetings.pdf](http://wr.victas.uca.org.au/assets/637/Manual_for_Meetings.pdf).

God's presence gained in these ancient practices to making actual decisions in the complicated, dynamic, and fully human environment of the church.

Assessing the scope of a decision is one of the most challenging aspects of decision making. SDRM defines scope as ensuring the "right people are treating the right problem from the right perspective."<sup>17</sup> Finding the right solution to the wrong problem does not serve any organization well. While many things can go wrong determining scope, cognitive theory suggests the most persistent error will be assuming the organization can achieve more than it can in less time than leaders expect. Optimism bias blinds leaders to the reality of obstacles and failure: maybe *other* organizations might run into trouble, but not the one we are leading.

Daniel Kahneman embarked upon a project with Amos Tversky and others to write a textbook with the laudable goal of improving judgment and decision making at the high school level. After a year of meeting and outlining, Kahneman asked the members of the project to independently write down their guess as to how long their project would take to complete. In general the group seemed to believe the project would take two years, with the highest estimate being two and one-half years. Kahneman then asked a curriculum expert present in the room for an assessment of how much time other similar groups took to complete a project of this scale. With embarrassment the expert replied that perhaps 40% of the groups failed to finish and

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<sup>17</sup> McNamee and Celona, *Decision Analysis for the Professional*, 229.

those that completed took at least seven years. Kahneman wryly noted that although this new information should have led the group to disband, they persisted. While eventually successful, the group took eight years to finish the project, a full six years longer than most estimated.<sup>18</sup> Kahneman described their experience as an example of planning fallacy, whereby group members tend to center on unrealistically best-case scenarios without the benefit of researching the facts from other similar situations.<sup>19</sup>

The planning fallacy particularly afflicts leaders facing new situations with which the organization has little experience, which describes nearly every situation facing a typical congregational leader. With most congregational leaders acting as volunteers who also work full-time jobs, the decisions they face at the monthly board meeting are almost entirely novel. It is one thing to make decisions as an accountant, nurse, or teacher; but how does this accountant, nurse, or teacher apply the knowledge of the firm, hospital, or school in this ecclesial setting with so many unknowns? And because every complex decision is different, seasoned pastors may be even more prone to the planning fallacy than other congregational leaders because of the temptation to think they have been there and done that. With important decisions it is imperative to spend time on scope, allowing time to collect accurate information from comparable

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<sup>18</sup> Kahneman, *Thinking Fast and Slow*, 247.

<sup>19</sup> Kahneman, *Thinking Fast and Slow*, 249.



situations and being mindful of the tendency to make overly optimistic estimates that fail to account for unforeseen stumbling blocks.

When leaders believe they have articulated the right solution for the right problem and believe the scope is well understood, solutions will begin to arise. The Heaths point out that when organizations begin to discuss solutions and options a curious phenomenon occurs: groups get stuck considering only one or two possibilities. Narrow framing, thinking of a choice in terms of only two possibilities, lures even the savviest of leaders; avoiding this framing limit can dramatically improve decision quality.<sup>20</sup> Citing a study by researchers from the University of Kiel in Germany, the Heaths note that when organizations consider more than just a whether-or-not decision, the likelihood that their decision will improve increases significantly. When the researchers analyzed the data, the evidence was striking: if the executive board considered more than one alternative, they made six times as many very good decisions. (Specifically, 40% of the multi-option decisions were rated very good, compared with only 6% of the whether-or-not decisions.)<sup>21</sup> Another thought leader in this area, Roger Martin, argues that this ability to escape narrow framing, a gift and skill he calls integrative thinking, presents itself in the habits of highly creative people: “Integrative thinking is the ability to face constructively the tension of opposing ideas and, instead of

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<sup>20</sup> Heath and Heath, *Decisive*, Kindle locations 164-166.

<sup>21</sup> Heath and Heath, *Decisive*, Kindle locations 921-923.

choosing one at the expense of the other, generate a creative resolution of the tension in the form of a new idea that contains elements of the opposing ideas but is superior to each.”<sup>22</sup> Congregational leaders should consider the benefit of adopting a practice of exploring at least three options when facing a serious decision. Such a policy will never ensure that a decision will be wise, but anything leaders can do to avoid the natural tendency toward narrow framing is good stewardship.

Process can help congregations avoid narrow framing and generate creative, doable alternatives. While many congregational leaders have all too much experience sitting around a room late at night with a white board brainstorming, the Heaths recommend another approach. Because of the anchoring heuristic, brainstorming encourages narrow framing. The first few ideas tossed out in a brainstorming session often anchor any and all future discussions, prematurely limiting creative discussion. As an alternative to brainstorming the Heaths recommend an approach they refer to as ‘multitracking’. Pointing to the unusual success of the design firm Lexicon and a study of graphic designers, the Heaths note that rather than focus on one idea developing it until it is ready designers often work on several competing ideas simultaneously until the best idea finally surfaces. Indeed, in the study of graphic designers, not only did the

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<sup>22</sup> Roger L. Martin, *The Opposable Mind: How Successful Leaders Win Through Integrative Thinking* (Boston: Harvard University Press, 2007), 15, Kindle.

designers who followed the multitasking process achieve more success, but they enjoyed the process more as well.

The study compares two groups of designers working on designing an ad. In the single-track group each designer endured six rounds of criticism before finally submitting their finished draft. In the multitask group designers went through three rounds: in the first round they submitted three different ideas; in the second round they offered two ideas; and in the last round they delivered one final ad. Designers in both groups created six ads, but the experience was qualitatively different. Not only was the multitask group more successful, but also they found the process more enjoyable: “It feels better. After the banner-ad study concluded, both sets of designers were interviewed. Asked to rate the usefulness of the feedback they received during the design process, over 80% of the simultaneous designers said the feedback was helpful. Only 35% of the one-at-a-time designers agreed, and in fact, over half of them believed the feedback they’d received was critical of them.”<sup>23</sup> The significance of this discovery regarding the experience of the decision makers cannot be overstated when thinking of multitasking in a church context. While the quality of the decisions church leaders make is important, the experience of the church leaders is also incredibly important. How often do church boards task one leader or one group of leaders with designing something like an ad or a sign, only to subject these leaders to multiple rounds of

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<sup>23</sup> Heath and Heath, *Decisive*, Kindle locations 866-868.

criticism? At the end of the day if a leader succeeds in developing a good idea but winds up feeling bitter and criticized, the church loses. How easy would it be for congregational leaders to adopt a process by which they required themselves to generate more than two options and then asked committees to develop multiple ideas in a multitrack format? Perhaps such a policy might require more time, but the possibility of gaining better implementation and happier leaders more than outweighs the possible cost of taking more time.

A perennial issue facing decision makers is the anxiety generated by the decision itself. What if the stakes are high and the decision turns out to be a mistake? What if the organization chooses not to act and this indecision leads to an enormous missed opportunity? SDRM rightly advises leaders to remain as grounded as possible in their core values and evaluate trade-offs between alternatives based on these values.<sup>24</sup> The Heaths also advise decision makers to find direction by going *ad fontes*, as it were, adhering to long-term values.<sup>25</sup> However, the wisdom of the behavioralists is that adhering to values is not always so easy. Decision makers often experience physical symptoms of stress when they finally arrive at a decision point. Two problems result from these visceral influences: these visceral influences shape our thinking without our awareness; and even when we intellectually realize that we might be affected by a

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<sup>24</sup> McNamee and Celona, *Decision Analysis for the Professional*, 237.

<sup>25</sup> Heath and Heath, *Decisive*, Kindle locations 2495-2496.

change, we fail to account for how we will think and feel in the different state. George Loewenstein has shown that visceral changes in the body brought about by hunger, thirst, pain, and fear cause substantive changes in the choices people make.<sup>26</sup> Further, as also described earlier by Ariely, decision makers face an unfortunate empathy gap that prevents them from accurately understanding how their decision making will change from state to state. Simply put: the decision making brain in a heated church meeting is not the same brain as the one that first arrived at the meeting. Actual human participants in a highly charged meeting may just not be able to even name a core value let alone remain grounded in it.

One of the most important tools available to church leaders to address the effects of short-term emotion is allowing sufficient time to arrive at a decision. When emotions run high and create anxiety, leaders often just want to make a decision quickly to avoid the crucible of conflict. If some decision makers believe that the organization might miss an opportunity by not making a quick decision, they will feel much pressure to reach an immediate resolution. In *Wait: The Art and Science of Delay* Frank Partnoy notes that although humans crave the speed of fast decision making, human bodies are not geared to make complicated decisions quickly. Human brains, according to Partnoy, are good at making some fast decisions. Having evolved on the African savannah the human brain is great at deciding quickly whether a lion is going to attack; these same brains are poor

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<sup>26</sup> Camerer, Loewenstein, and Rabin, *Advances in Behavioral Economics*, Kindle locations 17714-17715.

at making quick decisions when it comes to complicated, interrelated social situations.<sup>27</sup>

Anecdotally, some well-known leaders are famous for taking their time to make

decisions. Warren Buffett spends a great deal of time studying companies that interest

him but hardly ever makes trades, humorously describing his philosophy this way:

“Lethargy bordering on sloth remains the cornerstone of our investment strategy.”<sup>28</sup> This

unusually deliberative style has helped him avoid major catastrophes like the dot.com

implosion and anything related to subprime mortgage-backed securities. Buffett is

successful because he knows how to wait. President of USC and author of the

*Contrarian’s Guide to Leadership*, Steve Sample lives by two rules when it comes to

decisions: “Rule 1: never make a decision someone else could make; Rule 2: never, ever

make a decision today that can be put off until tomorrow.”<sup>29</sup> Sample claims many people

who want to appear decisive and engaged just start wading into complicated situations

making decisions before they really understand what is going on.

Congregational leaders can take heart that what is contrarian wisdom in

Sample’s sphere has a long pedigree in Christian leadership. Christopher Beeley’s work

*Leading God’s People: Wisdom from the Early Church for Today* is contrarian in its own way.

In it Beeley exhorts leaders to remember that the most practical disciplines they can

observe are not staying constantly busy and making fast decisions but attending to

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<sup>27</sup> Frank Partnoy, *Wait: The Art and Science of Delay* (New York: Perseus Books Group, 2012), 68, Kindle.

<sup>28</sup> Warren Buffet, “Berkshire Hathaway Annual Report,” accessed January 9, 2014, <http://www.berkshirehathaway.com/letters/1990.html>.

<sup>29</sup> Steve Sample, *The Contrarian’s Guide to Leadership* (San Francisco: Jossey-Bass, 2002), 72.

personal holiness, prayer, and the study of the scriptures, all of which slow down and complicate the decision-making process. He quotes Gregory of Nazianzus who affirms that God can make use of a wooden aquaphor only if it is full of water, the water in this case being the inspiration of the Holy Spirit.<sup>30</sup> Hence, in every case and perhaps especially when decision makers feel behind and pressured to vote, it is the leader's most important responsibility to remain prayerful and reflective, slow to render judgments, and quick to recognize that God's ways are not always immediately clear. Leaders should not view time that deliberative bodies take to pray and read scripture together as tangential to the work of the body; often this spiritual work plays the very practical role of giving bodies the room they need for short-term emotions to settle.

After leaders finally have a realistic scope, good options, and the peace of mind grounded in long-term values to make a decision, they are not out of the woods. When leaders engage in analyzing various options to find the best way forward, they face one of the most challenging biases of all: the confirmation bias. As discussed earlier in the lists of common biases, the confirmation bias describes the process by which decision makers highlight data that supports the option they intuitively favor and discount contradicting information. Similar to how confirmation bias interfered with sound biblical interpretation and theological reflection, the great difficulty of the confirmation bias is that decision makers are not aware of its influence and often believe that they are

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<sup>30</sup> Christopher Beeley, *Leading God's People* (Grand Rapids, MI: Eerdmans, 2012), 29.

acting rationally and objectively when, in fact, they are simply finding facts to support the conclusions at which they have already arrived. Of confirmation bias Dan Lovallo, a professor of decision making states: "Confirmation bias is probably the single biggest problem ... because even the most sophisticated people get it wrong. People go out and they're collecting the data, and they don't realize they're cooking the books."<sup>31</sup>

At least two elements are required for leaders to reduce the effects of confirmation bias: leaders must accept that confirmation bias afflicts them even when they are not aware of it; and leaders need to seek out voices who will raise objections to proposed decisions. Congregational leaders may have an advantage over business leaders when it comes to accepting that they are affected by confirmation bias: congregational leaders formed by a biblical faith believe to some degree that when it comes to discerning God's will for their congregation that God's ways are not always their ways. Scriptural anchoring can play a vital role in helping leaders to accept that even ideas about which they feel strongly may not be exactly what God, prompting through the Holy Spirit, desires of their congregation. Even the best idea any leader can articulate will not exhaust God's plan for a people. And yet, as much as congregational leaders might be able to agree that they may not be able to perfectly articulate God's plan, which should allow for some room to push on and question any and all proposals, another factor of congregational life makes this room for examination perhaps more

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<sup>31</sup> Heath and Heath, *Decisive*, Kindle locations 194-196.



difficult than it is in the business world. In a volunteer organization few people show up to meetings to experience emotional discomfort, a discomfort that many experience both in the giving and receiving of criticism. Because of the challenging nature of pushing against the confirmation bias, the development of an institutional practice to push against the confirmation bias seems even more important.

One practice that checks confirmation bias can even be traced back to the church itself: the role of a formal devil's advocate. Up until the leadership of Pope John Paul II the Roman Catholic Church acknowledged the importance of the devil's advocate, a leader whose role was to bring to light disconfirming evidence in the canonization process. It is easy to see why the church would need to institutionalize such a role. Human beings on their own find it difficult to speak against people many view as saints. However, when it is an individual's role to promote the faith, (from *promotor fidei*, the official title of this office) by playing a critical and questioning role, the office takes the personal conflict away. It is no surprise that since this role was abolished, the number of saints canonized by the church has soared.<sup>32</sup> Leadership teams in the church would be wise when considering major decisions to appoint at least two people on the board to play the role of promoters of the faith and, whether they personally agree or disagree with a possibility, bring to light as much strategic thinking and data as possible that would show why an idea might not be good for the institution.

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<sup>32</sup> Heath and Heath, *Decisive*, Kindle locations 1494.

SDRM lists a final question leaders must ask when they are assessing the quality of their decision: whether there is commitment to action. SDRM recommends a thorough process, referred to as the decision cycle, ensuring decision makers align with those executing decisions and ensuring that all of the right people have been consulted. Attention to this decision cycle process encourages widespread agreement to act.<sup>33</sup> While SDRM is surely correct to suggest such steps to ensure commitment to action, one of the most significant factors influencing commitment to action is not simply making sure everyone is in the loop but understanding and accounting for the sense of loss people in the organization will feel as change occurs.

Congregations are one of the most, if not the most, sensitive organizations to loss aversion. Even when they agree with a decision, good changes at a church can still feel painful for participants because every change represents difference, which means loss. In *Open Secrets* Richard Lischer painfully and beautifully describes the education he received in the first parish he served when he attempted to remove the American flag from the sanctuary. He writes: "I should have known not to try to remove the American flag from the chancel. To me, the national flag represented an intrusion into the sacred space of the congregation, an obvious symbol of civil religion."<sup>34</sup> Then, speaking as a well-trained theologian, he continues: "Theologically, the flag has no business beside

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<sup>33</sup> McNamee and Celona, *Decision Analysis for the Professional*, 243.

<sup>34</sup> Richard Lischer, *Open Secrets: A Spiritual Journey Through a Country Church* (New York: Doubleday, 2001), 89.

the altar.”<sup>35</sup> Predictably, the young pastor met a brick wall in the form of a resistant congregation. Unpredictably, Lischer was gifted with the realization that his understanding of what the flag symbolized was neither the only understanding possible nor even, perhaps, the deepest understanding. An older parishioner, Don Semanns, clarified the issue by simply telling a story about receiving the news of his uncle’s death during World War I. The motion was tabled, and Lischer realized that: “the flag, as it turned out, did not represent civil religion or any other abstraction, not, at least, for my congregation. It simply told a story that everyone wanted to remember but found too sorrowful to hear.”<sup>36</sup>

When decision makers consider the future and assess the commitment to action, they must not only do the difficult work of making sure ideas are communicated well to the community, but they must also walk the extra mile of asking hard questions about what kind of loss different community members might experience. If possible, leaders should be as creative as possible at finding solutions that minimize loss. I am grateful to Professor James F. Kay of Princeton Theological Seminary who passed along a helpful suggestion for a gender inclusive baptismal formula consistent with the tradition. He recommended that pastors avoid one common solution of substituting Creator, Redeemer, and Sustainer for Father, Son, and Holy Spirit. Not only is this substitution

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<sup>35</sup> Lischer, *Open Secrets*, 89.

<sup>36</sup> Lischer, *Open Secrets*, 90.

theologically problematic, modalistically referring to one God with merely three different job descriptions, but it also creates needless loss by removing the familiar language of God as Father. Rather, Kay suggested, consider the formula: “I baptize you in the name of God the Father, Son, and Holy Spirit. One God: Mother of us all.” While maternal language might not fly in every congregation, anecdotally I have found that adding language rather than taking away language has been far less divisive.

One closing point is that the decision-making process does not end when the decision is made. Once human beings make decisions the optimism bias coupled with the fact that life moves forward and brings ever more challenges makes it very difficult for decision makers to prepare for the possibility that their decisions might be wrong. As previously seen, decision makers find it easy to believe that *others* might make mistakes, but find it very difficult to believe that *they* are capable of such error. This cognitive limitation is as true in the church as it is everywhere else, and ecclesial leaders would benefit by acknowledging that the decision-making process is not over until they prepare for the possibility of decision mistakes.

One effective practice the Heaths recommend is what psychologist Gary Klein calls the ‘premortem’. While a postmortem examines the reasons for death after the fact, a premortem is an exercise in imagining all of the reasons a decision might fail in the long term. Leaders are encouraged to imagine that in twelve months a major decision they have made turns out to be disaster. They are asked to consider all of the reasons

that contributed to this failure. The premortem frees leaders to remember that leaders and their decisions are always fallible, no matter how brilliant a particular decision may seem at the time. Similar to how the wisdom of spiritual practices can help achieve emotional distance from the short-term turmoil surrounding difficult decisions, the church also provides an unusually rich soil for premortem imagination. While the term premortem can seem shocking, especially in a North American context so devoted to focusing on the positive and eliminating the negative, the early church borrowed from the Roman *memento mori* tradition to demonstrate their unflinching attitude toward death. Iconography of St. Jerome, for instance, almost always includes Jerome holding or standing atop a skull, pointing to the traditional belief that Jerome worked in the presence of a skull to remind him that death could bring failure to his work. This *memento mori* tradition flourished in the church during the medieval period and again in the Victorian era. Perhaps an ecclesial behavioral turn can reawaken interest in the dormant practice of *memento mori*. Church leaders could once again be inspired to face the possibility of failure, albeit in a less morbid sense, by drawing upon the premortem resources that are already part of the tradition.

### ***Role of a Pastor***

Behavioral theology recovers a more biblical sense of what it is to be a pastor by fleshing out what it means for a pastor to be a shepherd, arguably the most biblical of pastoral images. Pastors today struggle to find a guiding metaphor; they are encouraged

by some to think of themselves as nonprofit CEOs, by others to imagine themselves as pastoral counselors, and by still others to see themselves as spiritual formation gurus. One of the hardest questions with which pastors grapple is: “Who am I?” Pastoral identity comes to a head over the question of how a pastor lives into being a decision maker. Should a pastor be an assertive decision maker or more of an equipper, someone who empowers congregational leaders to own the ministry of the congregation? Or, is some kind of combination the right leadership style? Pastoral observers like Lovett Weems and Jack Carroll see this tension as a continuum between being authoritarian on the one hand and laissez faire on the other. Authoritarian leaders make too many decisions on behalf of their people, while laissez faire pastors do not offer enough guidance.<sup>37</sup> Weems and Carroll argue that pastors should aim for something in the middle, although Carroll cites survey data indicating pastors who fail to offer leadership can actually be more harmful to congregations than pastors who are viewed as authoritarian.<sup>38</sup>

But is a middle ground really best? Pastors guided by behavioral theology will look for a way to be assertive and supportive at the same time. To be sure this dual role is something both Weems and Carroll desire to see in pastors; however, behavioral theorists offer the compelling metaphor of a choice architect that outlines a vision of

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<sup>37</sup> Lovett Weems Jr., *Church Leadership: Vision, Team, Culture, Integrity* (Nashville: Abingdon Press, 2010), 5.

<sup>38</sup> Jack Carroll, *God's Potters: Pastoral Leadership and the Shaping of Congregations* (Grand Rapids: Eerdmans Publishers, 2006), 137.

what a shepherd might look like in the twenty-first century church. To behavioral theorists like Cass Sunstein and Richard Thaler, the question of whether pastors as leaders should be more decisive or more equipping is not a helpful distinction. Sunstein and Thaler suggest that the question should not be *whether* to make decisions that shape congregations, but *what kind* of decisions pastors should be making. To use the language of Sunstein and Thaler: pastors need to be extremely assertive as choice architects, a role that ultimately supports congregational leaders and congregations to make their own decisions in a way that leads to individual and communal flourishing.

Choice architects function in much the same way that shepherds do. Shepherds are assertive in that they are responsible for leading their flocks to areas in which they can flourish. As the Psalmist sings unforgettably in Psalm 23: "The Lord is my shepherd. I shall not want. He makes me to lie down in green pastures. He leads me beside the still waters." The shepherd's job is to lead the flock into an area that is broad and filled with good things in such a way that the sheep find it easy to make choices that help them flourish. And yet, a shepherd's job is not to somehow coerce, as if force were even possible, the sheep to eat the green grass or drink from the still waters. The sheep still have significant decisions to make that they and they alone must choose. In this sense the pastor as choice architect offers a concrete vision of what it is to be a shepherd today. The pastor as choice architect is absolutely responsible for leading teams to create a congregational choice architecture in such a way that the flock has access to the

resources they need. However, pastors are not superheroes somehow responsible for everything. Congregations, especially in a postmodern, individualistic environment, are composed of individuals responsible for the choices they make; and while it is the job of the choice architect to provide an array of good options, congregations do choose and their choices matter.

When describing the work of the choice architect, Sunstein and Thaler emphasize the importance of the status quo bias, referring to our tendency to accept default settings.<sup>39</sup> Sometimes the consequences of choosing the default are immaterial. Who has not been sitting at a Starbucks and reached for their iPhone or BlackBerry when another phone using the same default ringtone chimed? Individuals could change their ring tones, but most people just go along with whatever Steve Jobs thought best. More significant consequences include the illustrations discussed earlier regarding European donor organ participation and retirement savings opt in at the University of Chicago. Government officials at the highest levels have even taken notice. Prime Minister David Cameron of the United Kingdom established a behavioral insights team, known as the ‘nudge’ unit, to make recommendations on policy decisions as diverse as tax collection, unemployment, to discouraging the proliferation of Internet pornography.<sup>40</sup> Coining the term ‘libertarian paternalism’, Sunstein and Thaler emphasize that choice architects may

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<sup>39</sup> Sunstein and Thaler, *Nudge*, 7-8.

<sup>40</sup> Katrin Bennhold, “Britain’s Ministry of Nudges,” *The New York Times*, December 7, 2013, accessed on January 14, 2014, <http://www.nytimes.com/2013/12/08/business/international/britains-ministry-of-nudges.html>.



nudge people to behave in certain ways by paying particular attention to how defaults are set and how decisions are framed. They would argue that choice architects like David Cameron avoid being coercive or manipulative by preserving freedom of choice.<sup>41</sup> Again, this harkens back to the image of the shepherd who is responsible for the environment the flock enjoys but not the individual choices each congregant makes.

Several factors combine to create situations where choice architects need to create nudges: when the benefits of a decision will be delayed; when people do not have a great deal of experience in a given situation; and when a situation is unusually complicated.<sup>42</sup> Many people experience the church as a place where all three of these factors come together. First, especially for a newcomer, the benefits of integration into a church family can feel excruciatingly delayed early on a Sunday morning. After whatever initial emotional high has dissipated, new participants can find themselves wondering why they continue to write offering checks and show up to night meetings. Second, even people who have grown up in the church can find some aspects of ecclesial life mysterious and foreign. Given how different church can be compared to other occupational environments, people can encounter choices at church for which they have little preparation. Third, while many can master simple life skills like tying shoe laces and driving a car, harder things like tying a bow tie or driving a manual transmission

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<sup>41</sup> Sunstein and Thaler, *Nudge*, 4-5.

<sup>42</sup> Sunstein and Thaler, *Nudge*, 72.

require more practice. Given the thousands of years of church history and the complexities of scriptural interpretation, making informed decisions in the church can be, to say the least, an extremely challenging activity. For these reasons churches are certainly places where choice architects might create helpful nudges.

A concrete example is church membership. As Christendom continues to unravel, the decision of whether to join a congregation becomes increasingly complex. What does it mean to be a member? Is it similar to being a member at Costco or Sam's Club? What does it mean to be a member of this or that particular denomination or nondenominational church? If a new visitor to a Presbyterian or Methodist church grew up Roman Catholic, does she have any sense as to whether her relationship to this new congregation is any different? If a visitor is baptized as a child, does he have to be baptized again? If a visitor was baptized as a child but now is not really sure what he believes about Jesus, can he be an active member of a congregation; or should he just attend and participate until his faith is more settled?

One church I have served responded to this confusion over membership by exploring changes to the default setting for membership. The denomination of this particular church, the Presbyterian Church (U.S.A.), officially offers four choices for membership: baptized members, active members, affiliate members, and then a category that includes everyone else. The reality on the ground for the leaders at this church is that the congregation cared for a wider spectrum of people than these categories named.

Some active members showed up once or twice a year, while many participants regularly attended and served but seemed disinterested in becoming members for various reasons. The session, the governing body of the congregation, determined that the defaults for membership were unhelpful. The defaults forced people to choose between either being a member, or being lumped into a category that includes everyone from people who show up every Sunday to people who may never attend.

The unhelpfulness of these defaults became clear when a new couple (to whom I shall refer as Carol and Bill) began attending the congregation. Carol was able to affirm Jesus Christ as her Lord and Savior, answer all the other questions for membership, and was interested in joining. Bill, on the other hand, was not quite sure he could affirm those questions honestly but wished to join, too. The inability to affirm the questions for membership presented a problem. Bill expressed that the pastor at the church they attended before told him the questions were just a formality and counseled him to just say yes whether he really affirmed the statements or not. Our leadership expressed to Bill that the tradition and his beliefs deserved a better answer. As the pastor, I began to meet with Bill over coffee to talk about our faith and see whether he might be able to honestly affirm Jesus as his Lord and Savior. When it became clear that his affirmation was not going to happen anytime soon, I felt backed into a corner by our defaults. I wanted to bless this man who faithfully attended our congregation and supported us

with his time and treasure, but at the same time I wanted to honor the integrity of our polity as well as the meaningful struggle of his doubt.

The session came to a decision that the default choices were unhelpful because the world these leaders served did not realistically break down into Christian members who show up all the time and can affirm their faith in Jesus versus everyone else. This church, like so many others, has rarely-seen members, and faithful people who attend regularly, love and support the congregational mission, and yet are not able or willing to affirm the questions for membership. As choice architects of the congregation, the session decided they needed more options. Having taken an oath to follow our denomination's polity, the elders knew they could not amend the categories of membership in the *Book of Order*. However, they realized the *Book of Order* did not preclude the session from adding a category in a way that still affirmed the polity. Borrowing from the practice of the first century synagogues who affirmed Gentiles who participated in worship but did not become circumcised and full members of the community by calling them God-fearers, the session began to welcome a new category designated as adherents into the life of the congregation by naming them and blessing them at the font. Per the polity of the denomination adherents cannot vote in meetings, serve as officers, or be counted as members, but now the blessing and naming of adherents are meaningful practices indeed. This congregation now has an extremely helpful choice to offer visitors interested in the church but with honest reservations

about membership. This church is now better able to honor their tradition and at the same time welcome questioning new brothers and sisters into the beloved community.

### ***Experimental Spirit***

One final action point that a behavioral theology offers the church is a recommendation to become more experimental, perhaps even playful. Confusion and anxiety, certainly emotions very much present among many of today's leaders, are not emotions related to good decision making from either a biblical or behavioral theoretical perspective. One response to confusion and anxiety is to look to leadership, particularly expert leadership, for answers. Again, the biblical witness lines up with behavioral theory to counsel caution when investing too much trust in human opinion. While biblical scholars might argue one need look no further than the history of Israel and the early church for evidence, a social scientist curious about the merit of expert opinions, Philip Tetlock, studied political experts in the 1980s to judge for himself.

In *Expert Political Judgment* Tetlock shares the research he gathered from a panoply of leaders widely acknowledged to have expert political knowledge. Tetlock asked these leaders to make 27,450 concrete predictions about the political future. At the same time Tetlock also asked a number of undergraduate students, as far from experts as one might imagine, to make similar predictions. While the good news is the experts did outguess the undergraduates, the bad news is that it was not by much. Further, Tetlock noted the disturbing fact that even when experts were proved wrong, many of

them were so well defended by their belief systems that they failed to change their opinions and viewed their failures as insignificant accidents.<sup>43</sup> While many have taken Tetlock's findings to skeptically argue that experts are over exposed and over paid, Tetlock himself does not draw this conclusion. Tetlock notes that the primary reason experts fail to accurately predict events is not due to the inherent unworthiness of expertise but to the complexity of the world the experts inhabit.

The world Tetlock describes is not simply the complicated world of geopolitical affairs; it is the world in general. Complexity certainly describes the contemporary church: an unusually diverse mix of people, perspective, and organizational structure. Leaders of congregations today are asked to be theologians, biblical scholars, nonprofit leaders, pastoral counselors, and the list continues. And, what is a congregation? Is it a house of prayer? Is it a business? Is it a relief agency? The body of Christ constitutes a dizzying array of complexity, and leaders would do well to heed the Apostle Paul's wisdom regarding honoring the diverse nature of this body. The church is a hand, foot, and eye, and more than all of these together; it is impossible to fully grasp without a holistic understanding that scholars like Tetlock argue lies outside the realm of human understanding. When complexity lies beyond the realm of deductive capacity, experimentation becomes the most appropriate learning posture.

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<sup>43</sup> Philip E. Tetlock, *Expert Political Judgment* (Princeton: Princeton University Press, 2009), 189, Kindle.

In *Adapt* Tim Harford agrees with Tetlock's view of the complexity of the world. Harford shares the memorable experience of design student Thomas Thwaites who undertook the task of recreating the humble toaster, an object produced en masse and readily available in the developed world. Thinking the toaster would not be that difficult to reproduce from scratch, Thwaites was quickly humbled by the vast complexity involved in its manufacture. Even the simplest model Thwaites could find was composed of over four hundred parts and subcomponents. To come up with the basic elements of construction like iron ore, Thwaites had to travel great distances and attempt processing techniques totally foreign to him. Ultimately, just to create enough usable iron Thwaites acknowledged cheating by using a microwave oven, although he notes that even this method was not easy as he destroyed one microwave oven in the process. At the end of the toaster project Harford describes Thwaites's less than stellar result: "Despite his Herculean efforts to duplicate the technology, Thomas Thwaites's toaster looks more like a toaster-shaped birthday cake than a real toaster, its coating dripping and oozing like an icing job gone wrong. 'It warms bread when I plug it into a battery,' he told me, brightly. 'But I'm not sure what will happen if I plug it into the mains.' Eventually, he summoned up the courage to do so. Two seconds later, the toaster was toast."<sup>44</sup> Thwaites notes ruefully that one could easily spend a lifetime building something from scratch as simple in appearance as the household toaster.

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<sup>44</sup> Tim Harford, *Adapt: Why Success Always Starts with Failure* (New York: Macmillan, 2010), 2, Kindle.

Harford's point in telling this story is to point out how easy it is to overlook how complicated the world has become. Commodities from toasters to lattes depend on a vast global network of trade and production. The average person living in a twenty-first century city is surrounded by billions of products with millions more being created every year. The complexity of this system makes problem solving an almost infinitely difficult task in that changing one part of the system necessarily means producing a chain of counter effects impossible for the wisest expert to fully predict. Perhaps the most difficult part of complexity for a leader is the lack of awareness most people have regarding the situation: "The complexity of the society we have created for ourselves envelops us so completely that, instead of being dizzied, we take it for granted."<sup>45</sup> Harford argues that the best response to this complexity is to adopt an experimental approach that acknowledges with humility the limitations of human knowledge.

Citing examples from the Soviet Union's failed attempt at centralized planning to the early failures by Donald Rumsfeld to adequately prepare for the Iraq insurgency, Harford demonstrates again and again how complicated situations require leaders who view themselves less as experts and more as learners. Harford lifts up experimental heroes like Scottish physician Archie Cochrane who railed against the God-complex attitudes he saw among other physicians of his day who simply asserted that some practices were more effective than others without any real evidence. Cochrane became

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<sup>45</sup> Harford, *Adapt*, 3.



so frustrated by the unwillingness of his colleagues to heed his call to test their ideas that he resorted to a ruse to gain a hearing. Concerned over the efficacy of coronary care units, Cochrane wondered whether patients recovered faster at home. Cochrane ran a study and then played a trick on his colleagues when he shared the results. Telling his colleagues that the home care trials were showing more deaths than the coronary care units, his colleagues scolded him for unethically putting people at risk. After allowing them to lecture him on the importance of patient care, Cochrane then acknowledged he had reversed the statistics: in reality the coronary care units were showing significantly higher mortality levels. Stunned, Cochrane's colleagues were forced to reevaluate the coronary care units in which they were so heavily emotionally invested. The point is complexity coupled with human cognitive limitations means responsible leaders should spend as much time testing their ideas as they do formulating them.

To this point one of the foundational practices of behavioral economics is the testing of economic theory to see when models accurately describe human behavior and when they do not. At least since George Katona's survey work related to the Federal Reserve, behavioralists have argued theory must always live in tension with experimental results. One of the great hallmarks and gifts of the behavioral turn is the humble acknowledgement that theory and practice exist in a dialectic: theory is required to formulate ideas, and experimental practice is required to understand how these

theories take flesh in complicated environments. The importance of testing ideas has a significant, if complicated, biblical heritage.

On the one hand there is a negative connotation associated with testing in Scripture. In Luke one of the three challenges Satan puts to Jesus in the wilderness is to throw himself down off the spire of the temple and trust that God's angels would not let him fall to his death. Jesus responds by quoting Deuteronomy 6:16: "Do not put the Lord your God to the test." In several other instances enemies of Jesus put questions to him with the specific purpose of putting the rabbi to the test. In the Lukan example testing seems equivalent to being presumptuous. The proper response to God's grace and care is to be grateful, rather than to presume upon it by putting it to the test in such a needless way. In other examples of Pharisees, scribes, and Sadducees challenging Jesus, testing may be less negative than it at first seems; upon reflection this testing may simply be part of the common rhetorical practices of Jewish intellectuals. Amy-Jill Levine is right to caution contemporary Christians who may read these examples of testing through an anti-Semitic lens and evaluate the passages as overly or unusually hostile to the testers.<sup>46</sup> Such testing was and continues to be a valuable aspect of the rabbinic give and take, and Jesus never responded with shock at being questioned but with the skillful banter of one unusually gifted in such exchanges. In none of these

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<sup>46</sup> Levine, *The Misunderstood Jew*, 40.

negative instances of the term testing do we find anything approaching the more scientific meaning of testing that a behavioral perspective advocates.

The Bible contains at least three examples of such scientific testing: in two of these examples the testing is viewed as acceptable, and in the third example the negative example only upholds the positive meaning. The simplest of the three examples comes from the letter of First John. Pain infuses the letter of First John written to a community experiencing a gut-wrenching internal division. Although the theological reasons for the split are not entirely clear, the author acknowledges that a group of former brothers and sisters who deny Christ had gone out from the community. While these antichrists seemed to be brothers and sisters, the author argues that their treason proved this familial relationship was never truly the case. Again, the pain of the break spills off the page. Given this painful break it is little wonder that the writer cautions his community to test what they hear: "Beloved, do not believe every spirit, but test the spirits to see whether they are from God; for many false prophets have gone out into the world" (First John 4:1). The author of First John goes on to describe the theological content for which the community should look to determine whether a teaching is true or false.

An even more sophisticated method of testing occurs in Chapter 6 of the Book of Judges. Throughout the Book of Judges, as well as the entire Deuteronomistic history, the Israelites cycled through seasons where they kept faith with God and prospered as a result, only to lose faith and do what was evil in the sight of the Lord and fall on hard

times. Chapter 6 opens with the Israelites doing what was evil in the sight of the Lord and being delivered over into the hands of the Midianites. While this capture is bad news, the good news is that God was raising up a new judge, Gideon, to lead the people into a more faithful time. Unusual for a judge, Gideon was not the most trusting of leaders.<sup>47</sup> Gideon first tested God by asking for a sign. God told Gideon to prepare an offering and place it upon a rock. When Gideon did so and poured broth over the food, the Lord consumed the offering in flame and appeared as an angel. Sufficiently moved, Gideon responded to God's request to tear down the altar to Baal the people had erected.

One might think that Gideon's need for proof was satisfied; but when God requested that Gideon go up against the overwhelming odds of the Midianites, Gideon requested another sign, only this sign would be on Gideon's terms. Gideon told God he would lay down fleece upon the ground, and in the morning he would check it. If the fleece was wet and the ground was dry, then Gideon said he could be sure that God would help him rescue his people from the hand of the Midianites. Surprisingly, God complied with Gideon's request. Even more surprisingly, Gideon was not finished with his experiment. Realizing that perhaps there might be some quality related to the fleece that might account for its wetness, Gideon asked for a second, slightly different trial: "Then Gideon said to God, 'Do not let your anger burn against me, let me speak one

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<sup>47</sup> Ariely, *The Upside of Irrationality*, Kindle location 3832.

more time; let me, please, make trial with the fleece just once more; let it be dry only on the fleece, and on all the ground let there be dew.’ And God did so that night. It was dry on the fleece only, and on all the ground there was dew” (Judges 6:39–40). These verses offer a powerful biblical example that God is at times extremely open and encouraging of an experimental process. The opposite of faith is not experimentation!

The third example of putting the Lord to the test comes from Isaiah Chapter 7 in which Isaiah is speaking with King Ahaz. Although this example is negative, in this case the negative serves to prove the rule. In 735 BCE King Ahaz of Judah confronts a terrible decision. King Pekah of Israel and King Rezin of Aram team up against the nascent power of Assyria. Part of their plan is to get rid of Ahaz and establish a puppet king in Ahaz’s place.<sup>48</sup> Ahaz only seems to have two options: fight this alliance on his own or fight this alliance with Assyria’s help. While Isaiah does not record the advice of Ahaz’s other advisors, it is not difficult to imagine them split on which path Ahaz should choose. Isaiah alone speaks against both options urging Ahaz to consider a third possibility: Isaiah tells him to place his trust in God and avoid getting involved. Interestingly, Isaiah records God Godself telling Ahaz to request a sign for reassurance. Ahaz, feigning a faith he does not have, sanctimoniously retorts that he would never test God in such a way: “Again the LORD spoke to Ahaz, saying, Ask a sign of the LORD your God; let it be deep as Sheol or high as heaven. But Ahaz said, I will not ask, and I

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<sup>48</sup> Bernard Anderson, *Understanding the Old Testament* (New Jersey: Prentice Hall Press, 1998), 296.

will not put the LORD to the test. Then Isaiah said: 'Hear then, O house of David! Is it too little for you to weary mortals, that you weary my God also? Therefore the Lord himself will give you a sign. Look, the young woman is with child and shall bear a son, and shall name him Immanuel'" (Isaiah 7:10–14). While at first one might assume testing God should be viewed as incompatible with the faith, here again testing seems to be exactly what God is desiring.

Viewed in this light the emphasis behavioralists place on experimentation and the tools they have developed to test theory can be helpful to the church. Currently, the church relies on untested theory to a far greater extent than experimentation. Once, in my position as the chairperson for the Committee on Ministry for our Presbytery, I was defending the common Presbyterian Church (U.S.A.) practice of formalized interim pastors leading congregations through long periods between installed pastors. When pressed by an interlocutor regarding the wisdom of this practice, I became indignant and insistent that congregations were healthier today than they were when this practice was not in place. Pushed to offer evidence for this belief, I was forced to admit that I had none. I realized instantly, and with chagrin, that I was simply repeating what I had been told by others I trusted, but I had no evidence, experimental or otherwise, to support my beliefs. That moment has stayed with me, and the overwhelming sense I have today is that the mission of the church is far too important and far too complicated for leaders to

accept untested theories as truth. Thus, I view the behavioral practice of careful experimentation as potentially offering a helpful corrective to the church.

## 7. Behavioral Theology and Church Growth, Stability, and Decline

Starting in the late 1950s mainline denominations along with other social organizations in America experienced numerical decline.<sup>1</sup> Explanations abound for this decline, but in spite of the fact that mainline denominations continue to experience aggregate numerical decrease, significant numbers of congregations do maintain their membership through moderate replacement growth while some congregations even experience more dramatic levels of growth.

The theological implications of numerical decrease and increase are complicated. Ever since John 6 when Jesus offended and alienated a large number of would-be followers, it is clear that not every numerical decrease signals spiritual failure. Similarly, not every growing congregation manifests theological fidelity and long-term institutional health. However, in the interest of institutional vibrancy, understanding as much as possible about why some mainline congregations experience numerical maintenance and growth while some experience decline would contribute greatly to the current conversation among voices like Mark Chaves, Robert Putnam, Robert Wuthnow, and Diana Butler Bass regarding the future of the mainline church.

Chaves offers a brilliant demographic analysis describing the effect of lowered birth rates and other forces on mainline churches and the general trend of decreasing

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<sup>1</sup> Robert Putnam, *Bowling Alone* (New York: Simon and Schuster, 2000), 71.



American religiosity.<sup>2</sup> Putnam and Wuthnow articulate broad sociological trends influencing mainline decline with Putnam emphasizing the important role the ‘nones’ may play in the mainline future.<sup>3</sup> Bass offers a socio-theological critique of mainline decline also focusing on the nones; however, Bass is far less optimistic that the church as it currently exists will be able to appeal to the nones.<sup>4</sup> While these voices are invaluable for understanding what is happening in mainline churches, broad sociological trends offer little understanding of how factors like congregational leadership might contribute to or impede this decline. Recent work in behavioral game theory may.

Cutting edge research by Harvard’s Martin Nowak illuminates one promising factor in understanding mainline numerical increase and decline: the willingness and ability of congregational leaders to cooperate. Nowak, a mathematician, studies game theory, primarily relying upon the iterated prisoner’s dilemma, which models cooperation and conflict to better understand behavior in populations as diverse as stickleback fish to cancer to human group behavior. Nowak builds on the work of Robert Axelrod who in *The Evolution of Cooperation* compared the results of computers using various strategies to play iterated prisoner’s dilemmas. Hypothesizing that the best strategy would be ruthless and complicated enough to be deceptive, Axelrod was

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<sup>2</sup> Mark Chaves, *American Religion: Contemporary Trends* (Princeton, NJ, Princeton University Press, 2011), 11.

<sup>3</sup> Robert Putnam and David Campbell, *American Grace: How Religion Unites and Divides Us* (New York: Simon and Schuster, 2010), 133.

<sup>4</sup> Diana Butler Bass, *Christianity After Religion: The End of Church and the Birth of a New Spiritual Awakening*, (San Francisco: Harper Collins, 2012), 245, Kindle.

surprised to discover that the most successful strategy was highly cooperative, although still willing to retaliate against an unprovoked defection. Taking this direction further, Nowak discovered other successful strategies that were even more cooperative. Eventually, Nowak studied the public goods game, a multiplayer version of the prisoner's dilemma in which he shows that groups eschewing the use of punishment thrive in comparison to groups willing to punish. Nowak cleverly names this counterintuitive truth: "punish and perish."<sup>5</sup> In essence Nowak argues that teams who learn how to cooperate with one another are not only more faithful but should be more successful in their efforts as well.

Theologically, a strong case can be made that a vital faith fosters responsible cooperation among church leaders. Nowak's work offers church leaders a way to test how this theory plays out, an experimental spirit that characterizes behavioral theology. I have studied whether there is a correlation between how elders in Presbyterian Church (U.S.A.) congregations with varying levels of growth or decline play two versions of a cooperative goods game. Viewing these games as a kind of living parable, I believe they offer insight beyond the game itself. These games allow the possibility for ecclesial leaders to discern whether trust is as present as they believe, whether this trust correlates with cooperative behavior, and, in conjunction with congregational statistics,

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<sup>5</sup> Martin Nowak and Roger Highfield, *SuperCooperators: Altruism, Evolution, and Why We Need Each Other to Succeed* (New York: Simon & Schuster, 2011), 230, Kindle.

whether this cooperative behavior is consistent with numerical growth, stability, or decline.

I will summarize the vibrant conversation occurring between behavioral game theorists regarding cooperation, punishment, and the public goods game. Indeed, Nowak's position regarding the superiority of cooperation in the absence of punishment is only one of many important views. Then, I will describe the study design (included in Appendix A). Next, I will present my initial predictions. Finally, I will offer the results of the study with a statistical and behavioral theological analysis.

## 8. Game Theory, Cooperation, and the Public Goods Game

John von Neumann and Oskar Morgenstern established the economic study of game theory in 1944 with the publication of their book *Theory of Games and Economic Behavior*. The games described in game theory attempt to outline conflicted social interactions. Johan Almenberg and Anna Dreber offer a concise description of these games: “A game is a simple, stylized way of representing a strategic interaction. It abstracts from specific details and attempts only to distill the essential, general structure of an interaction. A game consists of three elements: (1) the players; (2) the actions that the players choose from; and (3) the payoff functions that map each action to a payoff for an individual player, given the choices made by the other players.”<sup>173</sup> To those shaped by a biblical imagination the parabolic nature of the interactions in game theory provoke interest. Jesus eschewed abstract theological reflection in his teaching in favor of narrative parables. In a similar way game theorists describe their games in the form of curious stories about hunters deciding whether to pursue stags or hares, drivers stuck in the snow, and luckless prisoners forced to make a simultaneous decision regarding their mutual fate.

Despite the considerable influence game theory has had in economics and the intriguing connections with the biblical tradition, very little work has been done to

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<sup>173</sup> Nowak and Coakley, *Evolution, Games, and God*, 133.

connect these conversations. In *Biblical Games* game theorist Steven J. Brams casts biblical narratives in terms of payoff matrices and decision trees provocatively casting God as a player whose preferences and strategies can be encoded like any other player.<sup>174</sup> From the social science perspective Robert Wright in the *Evolution of God* applies the basic distinction between zero-sum and non-zero-sum games to the history of religion. Wright makes the argument that the great Abrahamic faiths already contain the seeds of non-zero-sum tolerance; the hope for peaceful co-existence depends on: “heed[ing] the lessons embedded in the Abrahamic scriptures; arrange things, wherever possible, so that people of different Abrahamic faiths find themselves in non-zero-sum relationships.”<sup>175</sup> It is only very recently with the unusual partnership between theologian Sarah Coakley and evolutionary biologist Martin Nowak that the connection between game theory and the biblical tradition is being more thoroughly studied. Critically, the partnership is not only conceptual but also experimental. Coakley has not only published her steps towards a humbled natural theology informed by a game theoretic critique of evolutionary biology, but she has participated in an experiment testing the

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<sup>174</sup> Steven J. Brams, *Biblical Games: Game Theory and the Hebrew Bible* (Cambridge: Massachusetts Institute of Technology Press, 2003), 5.

<sup>175</sup> Robert Wright, *The Evolution of God* (New York: Little, Brown, and Company, 2009), Kindle locations 6502-6503, Kindle.

influence of religious conditioning on the willingness of subjects to be cooperative in one-shot prisoner dilemma games.<sup>176</sup>

The historic disconnect may stem from the seemingly incompatible gulf between the rationalism of game theory and the biblical tradition. Classical game theory operated with the same assumptions regarding human nature as the standard economic model: classical game theory assumes people are rational and able to maximize their utility, possess self-control enough to pursue their best strategy, and are fundamentally self-interested and seek after their own best material payoff.<sup>177</sup> By now the behavioral critique of these assumptions should be familiar; behavioralists find particular value in game theory due to how easy it is to show that when actual humans play these games, they behave in ways the conventional model would have to describe as predictably irrational.<sup>178</sup> This insight not only chastens the rationalism of the standard model but also provides a bridge to the more realistic anthropology of the biblical tradition.

Four games are particularly helpful in seeing how actual people play in ways that diverge from how the standard economic model predicts: the dictator game, the ultimatum game, the prisoner's dilemma, and the public goods game. In the dictator game two strangers are paired up in a one-time interaction. One player, the dictator, is

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<sup>176</sup> David Rand et al., "Religious Motivations for Cooperation: An Experimental Investigation Using Explicit Primes." *Religion, Brain, and Behavior*, *Forthcoming* (January 28, 2013), available at SSRN: <http://ssrn.com/abstract=2123243> or <http://dx.doi.org/10.2139/ssrn.2123243>.

<sup>177</sup> Nowak and Coakley, *Evolution, Games, and God*, 133.

<sup>178</sup> Colin F. Camerer, *Behavioral Game Theory: The Roundtable Series in Behavioral Economics*, (Princeton, Princeton University Press: 2011), Kindle locations 344-345, Kindle.

given an amount of money and has to decide how much of the money to keep for herself and how much money to give to the other player.<sup>179</sup> While the standard model would predict that a rational player would give no money to the other player, when real people play this game the dictators almost always give away some amount.<sup>180</sup> As described earlier, the ultimatum game builds on the dictator game, with one player making a decision regarding how to divide an amount of money and the second player deciding whether or not both players receive the split amount. Again, in the standard economic model the first player should give as little as possible, and the second player should accept any offer since something is better than nothing. But, in actual studies players are far more generous and far more willing to reject unfair offers than the standard model would predict.<sup>181</sup>

Because the prisoner's dilemma and the public goods game provide the basis for the rest of this work and because the public goods game is really a multiplayer version of the prisoner's dilemma, it is worth spending more time and attention outlining each of these games. The prisoner's dilemma pits individual benefit over and against the collective good. One of the most studied games, the prisoner's dilemma was first conceived by Melvin Dresher and Merrill Flood during the dark, cold war era days

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<sup>179</sup> Nowak and Coakley, *Evolution, Games, and God*, 135.

<sup>180</sup> Nowak and Coakley, *Evolution, Games, and God*, 135.

<sup>181</sup> Nowak and Coakley, *Evolution, Games, and God*, 137.

in the RAND Corporation.<sup>182</sup> The dilemma was given its name and parabolic story from Albert Tucker, Ph.D. advisor to none other than John Nash. Tucker posited two prisoners being held separately in a police station. Although the police have enough evidence to convict both prisoners on a small charge, without further cooperation and testimony from at least one of the men the police will not be able to convict either on the most serious charge. So, the police offer each prisoner the same deal: testify against your partner and go free. Three possibilities arise from this situation: the prisoners cooperate with one another and say nothing to the police resulting in both being convicted on the lightest charge; the prisoners both give evidence (known as ‘defecting’) causing each to be convicted on the serious charge; or, diabolically, one of the prisoners maintains silence while the other defects, the result of which is the loyal partner is convicted on the most serious charge while the betrayer goes free.<sup>183</sup>

The rational strategy for playing the prisoner’s dilemma according to the standard model was articulated by none other than John Nash. In 1994 John Nash, John Harsanyi, and Richard Selton won the Nobel Prize in economics for their work in noncooperative game theory; Nash’s award-winning contribution was his formulation of the Nash equilibrium from 1951.<sup>184</sup> A Nash equilibrium exists whenever one player is

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<sup>182</sup> William Poundstone, *Prisoner’s Dilemma: John VonNeumann, Game Theory, and the Puzzle of the Bomb* (New York: Anchor Books, 1992), 117.

<sup>183</sup> Poundstone, *Prisoner’s Dilemma*, 118.

<sup>184</sup> Avinash Dixit and Barry Nalebuff, *The Art of Strategy: A Game Theorist’s Guide to Success in Business and Life* (New York: Norton, 2008), 229.



unable to improve their situation by unilaterally switching their strategy.<sup>185</sup> In other words a Nash equilibrium exists whenever each player is making the most rational, self-interested choice they can make in light of the other player's strategic possibilities. The Nash equilibrium for a prisoner's dilemma, even a repeated prisoner's dilemma in which players interact over a period of many rounds, exists when both players defect. Even though both players would benefit more if they cooperate, the specter of the 'sucker's payoff' is so costly that rational, self-interested individuals adopt a defensive, uncooperative position. However, as with the dictator game and the ultimatum game, when behavioral economists observe actual human beings play versions of the prisoner's dilemma, human beings are far more willing to cooperate than is, at least by John Nash's calculation, rational. But why are some groups more willing to cooperate than others? And are there mechanisms that exist to increase the willingness of people to cooperate with one another?

One of the first to seriously engage this question was mathematician Robert Axelrod. Axelrod fixed his scholarly attention on what he considers the central question in human interaction: "Under what conditions will cooperation emerge in a world of egoists without central authority?"<sup>186</sup> Wanting to model human behavior in the most realistic way, Axelrod decided to study open-ended, iterated prisoner's dilemma games

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<sup>185</sup> Sylvia Nasar, *A Beautiful Mind* (New York: Simon and Schuster, 1998), 95.

<sup>186</sup> Robert Axelrod, *The Evolution of Cooperation* (New York: Basic Books, 1984), 3.

pitting two players together for a repeated series of games. In order to model a world of egoists, nothing demonstrates humanity at its most venial like the prisoner's dilemma.

Wanting as much data as possible, Axelrod held a computer tournament in which specialists from such diverse fields as political science, computer science, mathematics, and biology entered computer programs that competed against other programs. Some of the programmed strategies entered were incredibly complicated, taking into account nuances in the opponent's patterns of behavior. Some of the programmed strategies were simple, composed of just a few lines of code. Many of the strategies were aggressive, seeking to defect as much as possible. Some of the strategies were conciliatory, showing a willingness to cooperate. Axelrod compiled all of these programmed strategies and carefully played them against one another, detailing the results. The surprising results led to his groundbreaking work *The Evolution of Cooperation*.

Axelrod and his research team assumed that the most successful program would be the most cutthroat, the one most willing to use subterfuge, and the one most willing to defect.<sup>187</sup> In other words Axelrod and his research team hypothesized that the program most resembling a stereotypically Machiavellian personality would dominate in this ultimately competitive game of total conflict. Curiously, however, the dominant program from a mathematician at the University of Toronto, Anatol Rapoport, was not

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<sup>187</sup> Axelrod, *The Evolution of Cooperation*, 33.

only the most simple, but it was among the nicest strategies as well. Rapoport's program, entitled 'tit for tat', is as simple as it is powerful: a tit for tat strategy will always begin by cooperating; it will always retaliate one time after the other program defects; then tit for tat will immediately go back to cooperating; and it will never deviate from this pattern.<sup>188</sup> After tit for tat won the first computer competition, Axelrod wanted to see how the strategy would fare against opponents that had a chance to prepare. Axelrod published the surprising results and welcomed more than twice as many competitors into a second tournament where, again, tit for tat came out on top.

Axelrod believes the power of tit for tat lies in its four attributes. First, the program is considered nice, because tit for tat begins by cooperating and will continue cooperating as long as the other player does not defect. Far from an anomaly, this willingness to cooperate was the norm for successful strategies: "Each of the eight top-ranking entries (or rules) is nice. None of the other entries is ... the nice entries received tournament averages between 472 and 504, while the best of the entries that were not nice received only 401 points."<sup>189</sup> However, this strategy is no doormat. When another program attempted to take advantage of tit for tat's willingness to cooperate by defecting, tit for tat immediately retaliated by defecting. The key point here is that while tit for tat is willing to retaliate, its strategy is what the researchers termed 'forgiving'

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<sup>188</sup> Axelrod, *The Evolution of Cooperation*, 31.

<sup>189</sup> Axelrod, *The Evolution of Cooperation*, 33.

meaning that immediately after defecting in retaliation, tit for tat returns to cooperating. Axelrod highlights the significance of forgiveness. Of the eight top-ranking nice entries, the one that was the least competitive was the rule that was the least forgiving.<sup>190</sup> Axelrod noted: “even expert strategists do not give sufficient weight to the importance of forgiveness.”<sup>191</sup> Finally, for Axelrod the final virtue of tit for tat is clarity; the simple clarity of tit for tat allowed other strategies to understand it, predict its behavior, and therefore make a free, independent decision whether or not to cooperate: “What accounts for TIT FOR TAT’s robust success is its combination of being nice, retaliatory, forgiving, and clear ... its clarity makes it intelligible to the other player, thereby eliciting long-term cooperation.”<sup>192</sup>

The significance of Axelrod’s work cannot be overestimated. Scholars in political science, history, and evolutionary biology have utilized Axelrod’s work to recommend strategies to world leaders, explaining why some species dominate biomes while others die out and elucidating how cooperative behavior can emerge without centralized control in the unlikeliest of circumstances. Indeed, Axelrod includes a brief study of the known truces that occurred spontaneously during World War I by showing how the unique nature of trench warfare created an iterative prisoner’s dilemma. In opposition to the high command on both sides, the English and German soldiers at the front created a

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<sup>190</sup> Axelrod, *The Evolution of Cooperation*, 37.

<sup>191</sup> Axelrod, *The Evolution of Cooperation*, 39.

<sup>192</sup> Axelrod, *The Evolution of Cooperation*, 54.

well-documented live-and-let-live system by being willing to cooperate, retaliate, and forgive when mistakes occurred. In one instance one visiting English officer described a German officer rushing forward when German artillery mistakenly fired on the English: "All at once a brave German got on his parapet and shouted out 'We are very sorry about that; we hope no one was hurt. It is not our fault, it is that damned Prussian artillery.'"<sup>193</sup>

It is possible to discern this tit for tat pattern in Scripture as well. Liberal Protestantism famously expresses embarrassment over the scriptural depiction of God displaying wrath and a willingness to punish throughout the Old and New Testaments. At one time the desire for niceness in liberal Protestantism became so great, H. Richard Niebuhr famously described it as a narrative in which: "A God without wrath brought men without sin into a kingdom without judgment through the ministrations of a Christ without a Cross."<sup>194</sup> Even a cursory glance through the great Old Testament Exodus narrative demonstrates how a tit for tat relationship emerges between a God who is forgiving but not forgetful and a stiff-necked people who observe periods of faithfulness punctuated by periods of rebellion. In the Corinthian correspondence one can sense a tit for tat relationship between the Apostle Paul and the fractious church in Corinth. While speaking lofty words about faith, hope, and love, Paul is quick to recommend

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<sup>193</sup> Axelrod, *The Evolution of Cooperation*, 85.

<sup>194</sup> H. Richard Niebuhr, *The Kingdom of God in America* (New York: Harper and Row, 1937), 137.

excommunication for the unnamed man sleeping with his father's wife. A tit for tat strategy provides a somewhat realistic heuristic to study community emergence and formation in many biblical stories.

But, does tit for tat solve the prisoner's dilemma? Is tit for tat the best strategy for every conceivable situation? Robust mathematician Martin Nowak and others discovered that as powerful as tit for tat was in Axelrod's two tournaments, the strategy also brought with it troubling side effects. The main problem was that tit for tat's eagerness to punish defection could cause long strings of mutual defection, which was harmful to both parties. Especially when played in more realistic settings by humans rather than computers, 'noise' caused by error created significant trouble. Nowak and others found two kinds of noise; they named the first kind of noise the 'trembling hand', referring to mistakes caused by a player wanting to make a certain choice but picking the opposite by mistake.<sup>195</sup> 'Fuzzy mind' represents the second kind of noise where one player mistakenly believes the other player defected against them and retaliates when the other player had actually cooperated.<sup>196</sup> When these kinds of mistakes occur, as they do with actual people, even a nice, forgiving strategy like tit for tat is not able to foster cooperation.

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<sup>195</sup> Nowak and Highfield, *SuperCooperators*, 33.

<sup>196</sup> Nowak and Highfield, *SuperCooperators*, 33.

Another question the Christian leader has to ask is whether tit for tat represents a faithful strategy in line with the deepest narrative of Holy Scripture: the self-giving of Jesus Christ on behalf of the world. While the student of scripture might detect patterns of initial cooperation, commensurate defection in the face of rebellion, and forgiveness in the Exodus narrative and in some of Paul's relationships with new churches, is this pattern consistent with the self-giving love of Jesus Christ? Jesus is certainly no doormat despite how Axelrod typecasts him in one series of experiments in which the 'Jesus strategy' (always cooperate) is matched against a 'Lucifer strategy' (always defect).<sup>197</sup> Jesus is far from nice all the time as has already been shown: he defected from the religious establishment calling the Pharisees whitewashed tombs filled with dead men's bones; he threw the money lenders out of the temple whipping them with cords; and he acknowledged that he did not come to bring peace, per se, but a sword, sometimes dividing families and friends. Yet, while Jesus shows some willingness to defect in certain ways, the great story of the Gospels is the son traveling into the far country and offering himself on behalf of many; this story is one of radical forgiveness. To frame the theological in the language of game theory, in his crucifixion and death Jesus crucifies defection itself. Rising to newness of life, Jesus rises categorically beyond the limited framework of tit for tat and possibly beyond the framework of any strategic pattern.

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<sup>197</sup> *Radio Lab*, Radio Lab Podcast: Season 9, Episode 1, "The Good Show," aired December 14, 2010, accessed January 14, 2014, <http://www.radiolab.org/2010/dec/14/>.

Dissatisfied with the problems of tit for tat but intrigued with how biologists were beginning to use the prisoner's dilemma to shed light on evolutionary theory, Nowak continued to explore the problem by creating an evolutionary computer simulation of the prisoner's dilemma. Nowak was able to create worlds in which different strategies could interact, and, depending on their strategic interactions, winning strategies would be allowed to reproduce and losing strategies would not.<sup>198</sup> Nowak was fascinated by what he observed. Initially meaner strategies that were not willing to cooperate and were eager to defect defeated nicer strategies like tit for tat, reproducing quickly almost to the point of taking over. Just when Nowak believed these harsh strategies would take over, a strange thing happened repeatedly: the cooperative strategies staged a comeback from the margins as the defectors stumbled at the center unwilling to cooperate with one another. Moreover, not only did more cooperative strategies advance, but a strategy even more willing to forgive than tit for tat, a strategy known as 'generous tit for tat', proved more robust.

Generous tit for tat plays exactly like tit for tat: it always starts by cooperating; it always attempts forgiveness after it defects; but it differs by being more willing to forgive and by being unpredictable with its grace. While the tit for tat strategy of always defecting when defected against subjected the strategy to potentially long rounds of costly, mutual defections, generous tit for tat uses a probability function directing it to

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<sup>198</sup> Nowak and Highfield, *SuperCooperators*, 34.



defect around one time for every three defections. This extra willingness to forgive allows for noise, and the randomness of this extra forgiveness means the strategy could not be taken advantage of by more hostile strategies.<sup>199</sup> Robert Axelrod viewed tit for tat's clarity as a strength but in light of generous tit for tat's greater success, Nowak concludes that sometimes it is preferable to be graciously mysterious.

Not all researchers are as convinced as Robert Axelrod and Martin Nowak that the prisoner's dilemma offers realistic explanatory power. Critics argue that the prisoner's dilemma is both too artificial and too drastic.<sup>200</sup> In the real world one rarely encounters pristine examples of conflict between only two people. And when only two people relate in this way, it is rarely the case that they have to choose whether to cooperate or defect simultaneously without any communication. Acknowledging these criticisms, Nowak and his team responded in two ways. First, they developed an alternating iterative prisoner's dilemma in which one player chooses to cooperate or defect and the other gets to respond.<sup>201</sup> Then, Nowak engaged the rich conversation taking place around the public goods game, a multiplayer version of the prisoner's dilemma, which many argue is more helpful in understanding real social interaction.

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<sup>199</sup> Nowak and Highfield, *SuperCooperators*, 36.

<sup>200</sup> Brian Skyrms, *The Stag Hunt and the Evolution of Social Structure* (Cambridge, UK: Cambridge University Press, 2003), Kindle locations 150-152, Kindle.

<sup>201</sup> Nowak and Highfield, *SuperCooperators*, 46.

In the Malthusian *Tragedy of the Commons* Garrett Hardin offers the classic version of a public goods game.<sup>202</sup> Hardin describes how in England farmers were allowed to graze their cattle on land known as the commons. The commons were land held for use by all. There were rules about how many cattle an individual farmer could graze on the commons, but there was little oversight. If every farmer cooperated and grazed the number of cows allowed to them, the land would sustain such use on an ongoing basis. However, each individual farmer stood to personally benefit by overgrazing. Given lax oversight, the farmers were unafraid of being punished. It is not difficult to imagine what happened. All the farmers decided if others would overgraze and benefit personally, they would be foolish not to do so as well. Most of the farmers overgrazed the commons, and within a short period of time the fields became a trampled wasteland of no use to anyone. As in a prisoner's dilemma, this public goods game pits the individual good of one farmer over against the common good of all. The farmers as a collective would have benefited most by cooperating and working together; however, the farmers as individuals benefited more in the short term by defecting. Hardin himself argued that overpopulation was ruining the environment, and in his view the only proper solution was strong governmental intervention.<sup>203</sup>

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<sup>202</sup> Garrett Hardin, "The Tragedy of the Commons," *Science* 162 (1968), 1243-1247.

<sup>203</sup> Hardin, "Tragedy of the Commons," 1245.

Whatever one thinks of the politics of Hardin's position, one of the assumptions he makes is that a strong, centralizing power exists that is able, either through punishment, reward, or some mix of the two, to establish cooperation. But what if no centralizing authority exists that is able to establish cooperation? In one of the most important public goods game studies Nobel laureate Elinor Ostrom researched how individuals stewarding what she terms common pool resources (CPRs) might be able to maintain cooperation when a centralized authority, a "Leviathan" as she put it quoting Hobbes, is either incompetent or absent.<sup>204</sup> Ostrom was particularly interested in whether communication could play a significant role. While Hobbes and noncooperative game theory discount the role of mere words, Ostrom hypothesized that communication might play a powerful role.<sup>205</sup> Ostrom created three forms of a public goods game: one group played without covenant or sword, meaning without communication or punishment; a second group played with the ability to communicate; and a third group played the game able to communicate and punish. The findings were stunning. Consistent with other public goods game studies, communities playing just the basic game observed decreasing levels of commitment over time. In a surprising discovery, however, communication not only played a major role in creating the environment for

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<sup>204</sup> Elinor Ostrom, James Walker, and Roy Gardner, "Covenants With and Without A Sword: Self-Governance Is Possible," *American Political Science Review* 86, no. 2 (1992), 404.

<sup>205</sup> Ostrom, Walker, and Gardner, "Covenants With and Without A Sword," 405.

cooperation to emerge, but communication proved superior to sanctions.<sup>206</sup> In the punishment conditions participants punished with greater frequency than was merited, suggesting that players punished not only free-riding behavior but also punished due to anger or mistake.<sup>207</sup> The resulting punishment lowered the collective score of the groups using it, leading Ostrom to conclude that where possible communities should invest in as much face-to-face communication as possible when cooperation is paramount.

Sometimes communication is not feasible or possible, however, and in these situations Ostrom acknowledges that sanctions can play an important role in inducing cooperation. Particularly interested in the role of punishment, economists Ernst Fehr and Simon Gächter hypothesized that the ability to punish is required for establishing cooperation. They further theorized that 'altruistic punishment', punishment that is costly to the punisher, represented a built-in evolutionary mechanism, which is important for humans to establish community life at a very deep level.<sup>208</sup> To study altruistic punishment, Fehr and Gächter decided to eliminate the possibility that an individual would punish another due to what evolutionary biologists refer to as either direct reciprocity, a condition in which a punisher harms another as a response to previous harm, or indirect reciprocity, a condition in which a punisher harms another as

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<sup>206</sup> Ostrom, Walker, and Gardner, "Covenants With and Without A Sword," 410.

<sup>207</sup> Ostrom, Walker, and Gardner, "Covenants With and Without A Sword," 411.

<sup>208</sup> Ernst Fehr and Simon Gächter, "Altruistic Punishment in Humans," *Nature* 415 (2002), 137.

a response to witnessing the punished harming another.<sup>209</sup> To eliminate these possibilities, Fehr and Gächter created a public goods game with four conditions: a partner condition with and without punishment; and a stranger condition with and without punishment. Again, as expected, in partner and stranger conditions without punishment, cooperation deteriorated as the game progressed until extremely low levels of cooperation existed.<sup>210</sup> Important for Fehr and Gächter's hypothesis is whether punishment was able to create levels of cooperation in partner and stranger conditions. Indeed, the findings show that in both partner and stranger conditions punishment did create the conditions for cooperation to emerge, with costly punishment discouraging free riding over time. Fascinating to Fehr and Gächter is the fact that individuals were willing to use punishment even in a stranger condition. Fehr and Gächter concluded that people were willing to punish perfect strangers at a cost to themselves simply arising from a feeling of anger at free-riding behavior: "We believe, in particular, that subjects strongly dislike being the 'sucker,' that is, being those who cooperate while other group members free ride. This aversion against being the 'sucker' might well trigger a willingness to punish free riders."<sup>211</sup>

Sometimes, even in the presence of free-riding behavior, punishers fail to rise up.

The chilling 1964 story of Kitty Genovese, a New York woman whose neighbors heard

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<sup>209</sup> Ernst Fehr and Simon Gächter, "Cooperation and Punishment in Public Goods Experiments," *The American Economic Review* 90, no. 4 (2000), 981.

<sup>210</sup> Fehr and Gächter, "Cooperation and Punishment in Public Goods Experiments," 982.

<sup>211</sup> Fehr and Gächter, "Cooperation and Punishment in Public Goods Experiments," 981.

an attacker kill her but did not call authorities for help, illustrates the volunteer's dilemma.<sup>212</sup> A volunteer's dilemma exists when players would benefit as a community by stepping forward to punish a free rider; and yet, because punishing is a costly behavior, potential volunteers are incited to inaction. Game theorists refer to this volunteer's dilemma as a second-order dilemma, as opposed to a first-order dilemma in which participants in a public goods game decide whether to cooperate in the first place. Casting doubt on Fehr and Gächter's premise that punishment stems entirely from a fundamental aspect of human nature, Wojtek Przepiorka and Andreas Diekmann experimented with public goods games to test whether punishment heterogeneity, creating conditions such that it cost more for some players to punish than others, would increase the likelihood of punishment.<sup>213</sup> Indeed, Przepiorka and Diekmann did find that when the cost of punishment was shared among players, players were less willing to sanction negative behavior.<sup>214</sup> When it was clear that one player was more easily able to punish, then punishment occurred both with greater regularity and to greater effect.<sup>215</sup> Przepiorka and Diekmann do not question whether punishment can help establish

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<sup>212</sup> David J. Krajicek, "The Killing of Kitty Genovese: 47 Years Later Still Holds Sway Over New Yorkers," *The New York Daily News*, March 13, 2011, accessed January 14, 2014, <http://www.nydailynews.com/news/crime/killing-kitty-genovese-47-years-holds-sway-new-yorkers-article-1.123912>.

<sup>213</sup> W. Przepiorka and A. Diekmann, "Individual heterogeneity and costly punishment: a volunteer's dilemma," *Proceedings of the Royal Society* 280, no. 1759 (2013), 1.

<sup>214</sup> Przepiorka and Diekmann, "Individual heterogeneity and costly punishment," 3.

<sup>215</sup> Przepiorka and Diekmann, "Individual heterogeneity and costly punishment," 3.

cooperation, but they do question Fehr and Gächter's assumption that people are punishing by nature.

In a full rebuttal of those arguing for the necessity of punishment, Martin Nowak and his colleagues argue that while cooperation can emerge when players punish free riders, punishment is neither required nor is it an optimal way to create the conditions for cooperation to emerge. Arguing that Fehr and Gächter's study design is unrealistic, Nowak's team suggests that in most real life public goods games players have sustained interaction and some knowledge about past action.<sup>216</sup> Reputation, they argue, plays an incredibly important role in understanding how cooperation can emerge in such a game. To this end Nowak's team designed a public goods game experiment in which players interact in a group for several rounds. As with all public goods games players have the ability to contribute monetary units to a common pool. This pool is then multiplied, in this game by a factor of 1.6, and then distributed equally. Nowak's team studied four conditions: a standard game; a game with a second round in which players could punish another player at cost to themselves; a game with a second round in which players could reward another player at cost to themselves; and finally a game with a second round in which players could punish or reward another player at cost to themselves.<sup>217</sup> Nowak's team questioned Fehr and Gächter's conclusion that punishment was required in order

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<sup>216</sup> David Rand et al., "Positive Interactions Promote Public Cooperation," *Science* 325, no. 5945 (2009), 1272.

<sup>217</sup> Rand et al., "Positive Interactions Promote Public Cooperation," 1274.

to establish cooperation, and this study supported their hypothesis.<sup>218</sup> In the standard game, cooperation diminished as expected; in the punishment condition, punishment effectively supported cooperation. However, the reward condition and the reward with punishment conditions were just as effective in promoting cooperation.<sup>219</sup> Further, in the reward and reward and punish conditions, teams that discovered how to foster cooperation without using punishment fared significantly better than teams that resorted to costly punishment.<sup>220</sup> The conclusion of Nowak's team is that while punishment is sometimes necessary to induce cooperation, it is inefficient. Further, in almost every situation it is more desirable for communities to find positive ways of facilitating community.

Taking the conversation from the theoretical to the practical, organizational psychologist Adam Grant resonates with Nowak's position and makes the case that in contrast to the common sense notion that one has to behave like a taker to get ahead, people who give can be highly successful. Grant studies reciprocity styles and divides people into three main categories: givers, takers, and matchers. Givers want others to benefit in social interaction, takers want to receive more than they give, and matchers are people who seek equality in their relationships neither being overly giving nor

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<sup>218</sup> Rand et al., "Positive Interactions Promote Public Cooperation," 1273.

<sup>219</sup> Rand et al., "Positive Interactions Promote Public Cooperation," 1274.

<sup>220</sup> Rand et al., "Positive Interactions Promote Public Cooperation," 1275.



overly receiving.<sup>221</sup> Citing large studies of various professions Grant notes that a pattern emerges regarding the long-term success of givers, takers, and matchers. In line with conventional expectations, across the board those deemed to be at the bottom of their colleagues in terms of pay and regard are givers. Takers and matchers dominate the middle of the success ladder. The surprise is that Grant discovers that neither takers nor matchers dominate the very top of the success ladder: givers do. Men and women practicing a giving reciprocity style were the most and least successful.<sup>222</sup> Grant argues that the givers at the bottom show consistent and fixable behaviors that diminish their ability to thrive.<sup>223</sup> Thus, Grant establishes that a wise giving strategy, what he refers to as an 'otherish' strategy dominates mainly due to the fact that when givers succeed others around them succeed as well, making the whole community stronger.<sup>224</sup>

In a major study of negotiating styles Grant points out that the most successful negotiators do not follow a harsh taker's strategy but opt for a far more generous giving strategy that may not always pay off in the long term but pays off over time.<sup>225</sup> In another study of negotiation, MBA students with varying GMAT scores were paired off in negotiation games. The researches believed that the smartest players, those with the highest GMAT scores, would win by getting better deals for themselves. They found just

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<sup>221</sup> Adam M. Grant, *Give and Take: A Revolutionary Approach to Success* (New York: Penguin Group, 2013), 4, Kindle.

<sup>222</sup> Grant, *Give and Take*, 7.

<sup>223</sup> Grant, *Give and Take*, 189.

<sup>224</sup> Grant, *Give and Take*, 75.

<sup>225</sup> Grant, *Give and Take*, 213.

the opposite, however. The smarter players did perform the best over all, but they performed the best by negotiating better deals for their partners. The smartest players were also the most generous, and over time this generosity proved successful.<sup>226</sup> In these and in many other examples Grant shows again and again that Nowak's theory that supercooperators will thrive in comparison to more selfish and punitive strategies not only works out with numbers but in real life, too

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<sup>226</sup> Grant, *Give and Take*, 252.

## **9. Research**

### ***9.1 Initial Predictions:***

I observed congregational leaders of Presbyterian Church (U.S.A.) churches, members of local deliberative bodies known as sessions, play two versions of a public goods game modeled after the study by Martin Nowak described in detail in Appendix A. The first version of the game was a simple version of a public goods game with no option for reward or punishment. The second version of the game included the possibility for members to exact costly reward and punishment on one another. By studying congregations with different rates of growth and decline over a four year time period, I wanted to discover whether church leaders experiencing decline played in different ways than church leaders experiencing growth. This study assumes that session leaders have a substantive impact on the direction of the congregation; the way the session members, also known as elders, play the game accurately reflects how they live together in real life; and reward and punishment actions in the game equate to real actions such as rewarding thank you notes and public recognition for good work, as well as punishing negative comments, opposition, and other unsupportive behaviors church leaders might exhibit.

I predicted that leaders of churches with high and sustainable levels of growth would show more willingness to cooperate in the standard public goods game and would show a reluctance to use punishment in the second version. These behaviors

would reflect higher levels of trust, which I believed to be consistent with growing and sustainable churches. While I agreed with Chaves that much church growth and decline is a function of demographics, I also believed leadership would still play a vital role in healthy congregations. Churches with leaders who exhibit low levels of trust and who resort to punishment would have a difficult time thriving even in positive demographic environments.

I also predicted that leaders of larger churches would be more willing to use punishment than leaders of smaller congregations. Given Elinor Ostrom's findings regarding the importance of communication in avoiding the use of 'the sword' to maintain covenants, leaders of smaller congregations, by virtue of their size, would have more opportunity for conversation. Leaders of larger congregations, with less opportunity for face-to-face conversation, would find sanctions more necessary.

While I did not foresee this happening, I thought it might be possible that the leadership of struggling congregations might exhibit more cooperation than leaders of sustaining and growing congregations. Rather than showing trust, however, I suspected that this result might stem more from what Robert Putnam refers to as 'bonding capital' in *Bowling Alone*. Whereas 'bridging capital' creates bonds across cultures, Putnam notes that bonding capital creates close-knit ties within similar kinds of people. Because it creates a division between those inside the church and the world outside, it is possible that strong bonding capital could play a role in initiating congregational decline or

furthering it; and if leaders of declining congregations show high levels of cooperation, this dynamic might be at work since willingness to cooperate with one another might not necessarily exhibit an ability to welcome and get along with those perceived to be outsiders.

## **9.2 Results**

98 elders from 11 congregations, designated 1 through 11, participated in the study. Sessions played three rounds of the first version of the game, Game 1, and three rounds of the second version of the game, Game 2. The raw data from both games is included in Table 1.

**Table 1: Raw Data**

		Game 1								Game 2												
		Round 1			Round 2		Round 3			Round 1					Round 2				Round 3			
Church	Player Names	Start	Give	Result 1	Give	Result 2	Give	Result 3	Start	Give	Choice?	Who?	Result 1	Give	Choice?	Who?	Result 2	Give	Choice?	Who?	Result 3	
1	A	20	10	30	10	41	12	49	20	10	None	A	33	9	Reward	H	29	13	Reward	D	59	
	B	20	12	28	12	37	15	42	20	12	None		31	12	Punish	A	48	16	Reward	A	51	
	C	20	20	20	20	21	20	21	20	20	None		23	17	None		39	18	None		80	
	D	20	20	20	20	21	11	30	20	20	None		23	16	Reward	G	24	20	Reward	G	47	
	E	20	6	34	9	46	9	57	20	10	Punish		29	10	None		40	9	Reward	D	50	
	F	20	17	23	17	27	15	32	20	17	None		26	15	None		32	15	None		40	
	G	20	10	30	13	38	15	43	20	10	None		33	11	None		55	11	Reward	K	75	
	H	20	3	37	5	53	4	69	20	20	None		23	17	Reward	C	35	18	Reward	A	36	
	I	20	10	30	10	41	10	51	20	8	Reward		A	31	10	Reward	B	26	10	Reward	C	35
	J	20	10	30	10	41	10	51	20	10	None		33	10	Punish	I	40	9	Reward	C	50	
K	20	15	25	16	30	16	34	20	15	None	28	14	None		35	16	Reward	C	50			
2	A	20	14	29	12	40	15	50	20	12	None	N	30	16	Punish	D	46	20	None		49	
	B	20	15	28	15	36	12	49	20	18	None		24	16	Punish	N	28	16	Reward	C	31	
	C	20	20	23	20	26	20	31	20	20	None		10	20	None		38	20	None		41	
	D	20	20	23	15	31	15	41	20	16	Punish		10	16	Reward	O	2	10	Punish	C	11	
	E	20	10	33	15	41	15	51	20	5	Reward		O	33	15	Reward	A	38	10	Punish	N	47
	F	20	15	28	15	36	15	46	20	15	None		27	15	None		36	12	None		71	
	G	20	20	23	20	26	20	31	20	20	None		22	20	None		26	20	None		29	
	H	20	10	33	10	46	10	61	20	10	None		32	10	None		46	10	None		59	
	I	20	15	28	15	36	18	43	20	12	Reward		N	26	12	Reward	N	34	14	Reward	C	39
	J	20	16	27	13	37	18	44	20	16	Punish		C	34	15	Reward	E	39	16	Reward	F	42
	K	20	12	31	10	44	12	57	20	12	None		30	12	Reward	C	38	12	Reward	F	45	
	L	20	15	28	8	43	10	58	20	10	Punish		N	28	10	Punish	E	38	8	None		53
	M	20	20	23	20	26	20	31	20	16	Punish		N	22	16	Reward	C	26	16	Punish	N	29
	N	20	5	38	11	50	17	58	20	7	Punish		D	7	20	None		11	12	Punish	C	-6
	O	20	10	33	15	41	15	51	20	15	Reward		J	35	15	None		56	15	None		64
	P	20	10	33	10	46	10	61	20	10	None		32	10	None		46	10	None		59	
3	A	20	15	20	15	21	15	24	20	15	Reward	C	65	15	Reward	M	61	10	Reward	N	110	
	B	20	13	22	13	25	13	30	20	8	Reward	M	60	10	Reward	J	85	10	Reward	M	86	
	C	20	10	25	9	32	12	38	20	11	REWARD	G	45	13	Reward	J	67	9	Reward	J	69	
	D	20	9	26	10	32	10	40	20	9			23	8	Reward	B	38	10	None		43	
	E	20	12	23	10	29	10	37	20	9	Punish	J	23	8	Reward	L	26	8	Reward	F	41	
	F	20	6	29	7	38	12	44	20	7	Reward	A	25	7	Reward	J	29	7	Reward	A	45	
	G	20	10	25	10	31	10	39	20	10	Reward	A	34	10	None		39	10	None		44	
	H	20	7	28	7	37	6	49	20	7	Reward	I	25	7	Reward	D	29	7	Reward	E	33	
	I	20	6	29	10	35	12	41	20	14	Punish	L	30	11	Punish	K	30	9	Reward	A	32	
	J	20	7	28	8	36	8	46	20	8	Reward	A	12	8	Reward	C	63	8	None		82	
	K	20	9	26	9	33	10	41	20	8	Reward	C	24	9	Reward	M	14	8	Reward	A	17	
	L	20	10	25	9	32	9	41	20	9	Reward	A	11	9	Reward	B	25	8	None		32	
	M	20	5	30	5	41	7	52	20	8	Reward	B	36	0			71	0	None		98	
	N	20	7	28	7	37	10	45	20	8	Reward	B	24	8	Reward	C	27	8	Reward	A	42	
O	20	13	22	16	22	18	22	20	18	Reward	B	14	16	Reward	J	9	20	None		4		
4	A	20	16	24	10	32	12	38	20	10	None	B	38	15	Punish	F	47	10	Reward	F	72	
	B	20	12	28	12	34	10	42	20	10	Reward		C	34	10	Punish	H	36	10	None		29
	C	20	9	31	9	40	9	49	20	9	Reward		A	35	9	Reward	F	38	9	Reward	F	40
	D	20	8	32	8	42	8	52	20	8	None		28	8	None		36	8	Reward	I	39	
	E	20	10	30	10	38	10	46	20	10	None		26	10	None		32	10	Reward	I	33	
	F	20	16	24	15	27	15	30	20	10	Reward			22	10	Reward	G	24	8	Reward	A	51
	G	20	12	28	12	34	12	40	20	12	None		24	12	Reward	I	48	12	Reward	I	47	
	H	20	18	22	15	25	15	28	20	5	Reward		I	39	5	Reward	A	34	5	Punish	B	40
	I	20	15	25	15	28	15	31	20	15	Reward		H	29	15	Reward	G	38	15	Reward	A	70
	J	20	4	36	4	50	5	63	20	5	None		31	6	None		41	6	None		50	

Table 1 (continued)

		Game 1								Game 2											
		Round 1			Round 2		Round 3			Round 1					Round 2				Round 3		
Church	Player Names	Start	Give	Result 1	Give	Result 2	Give	Result 3	Start	Give	Choice?	Who?	Result 1	Give	Choice?	Who?	Result 2	Give	Choice?	Who?	Result 3
5	A	20	12	23	15	23	10	29	20	14	Reward	B	30	12	Reward	E	31	12	Punish	B	33
	B	20	15	20	5	30	12	34	20	10	None		38	12	Reward	C	51	13	Punish	D	52
	C	20	0	35	7	43	11	48	20	9	None		27	10	None		46	12			64
	D	20	12	23	13	25	10	31	20	12	None		24	11	None		30	14	Reward	C	18
	E	20	6	29	6	38	7	47	20	5	Reward	A	27	6	Reward	B	46	5	Reward	B	55
6	A	20	15	27	15	33	15	42	20	15	Reward	B	22	15	None		34	15	Reward	C	70
	B	20	18	24	16	29	17	36	20	10	Reward	D	51	15	Reward	C	59	15	Reward	A	35
	C	20	12	30	10	41	15	50	20	15	None		26	15	Reward	D	46	15	Reward	A	58
	D	20	15	27	14	34	15	43	20	20	None		33	20	None		52	5	Reward	A	62
	E	20	13	29	13	37	15	46	20	13	None		28	13	Reward	F	50	14	Punish	B	51
	F	20	7	35	10	46	10	60	20	5	Reward	B	32	20	Reward	E	47	5	Punish	B	57
7	A	20	10	31	12	39	12	47	20	12	None		17	12	Punish	G	34	12	Punish	D	49
	B	20	11	30	11	39	11	48	20	12	Reward	B	37	12	Reward	C	42	12	Reward	D	57
	C	20	10	31	10	41	11	50	20	12	Reward	F	25	12	Punish	G	42	12	Reward	F	33
	D	20	10	31	10	41	10	51	20	10	None		31	10	Reward	F	50	10	Reward	B	55
	E	20	15	26	12	34	12	42	20	12	Punish	A	25	12	Reward	G	30	12	None		49
	F	20	15	26	12	34	12	42	20	14	Reward	G	23	14	Reward	A	26	14	Reward	H	39
	G	20	14	27	15	32	15	37	20	17	Punish	F	32	18	Reward	D	19	12	Reward	E	34
	H	20	13	28	12	36	13	43	20	12	None		29	12	None		38	4	Punish	C	61
	I	20	16	25	16	29	15	34	20	13	None		28	13	Punish	F	32	13	Reward	G	34
J	20	14	27	14	33	14	39	20	14	None		27	14	None		34	15	Reward	A	34	
8	A	20	12	26	7	36	19	35	20	13	Reward	G	30	6	Reward	B	35	15	Reward	D	35
	B	20	12	26	12	31	12	37	20	13	None		22	13	None		72	13	None		66
	C	20	5	33	6	44	4	58	20	5	Reward	G	26	2	Reward	B	47	15	Reward	F	59
	D	20	8	30	8	39	7	50	20	8	None		27	7	Reward	C	31	6	None		56
	E	20	13	25	12	30	10	38	20	13	None		22	12	None		25	10	Punish	B	30
	F	20	15	23	15	25	15	28	20	2	Reward	A	29	10	Reward	B	30	10	Reward	C	47
	G	20	10	28	12	33	10	41	20	10	None		49	12	Reward	B	48	10	None		57
9	A	20	5	34	6	48	6	61	20	4	Reward	D	29	4	Reward	D	36	5	Reward	C	44
	B	20	10	29	10	39	10	48	20	10			27	15	Reward	F	23	16	Punish	J	20
	C	20	12	27	13	34	12	41	20	15			34	12			37	12			54
	D	20	20	19	20	19	19	19	20	15	Reward	C	42	16			77	20			86
	E	20	6	33	6	47	5	61	20	5	Reward	D	28	2	Reward	D	37	4	Reward	D	46
	F	20	18	21	19	22	18	23	20	15			22	10			39	10			46
	G	20	12	27	10	37	9	47	20	8			29	5	Reward	D	35	4			36
10	A	20	10	28	10	35	6	45	20	8	Reward	C	23	8	Reward	B	37	5			45
	B	20	14	24	12	29	12	33	20	10			37	12			51	10			54
	C	20	20	18	20	15	16	15	20	20			27	18	Reward	A	19	19			13
	D	20	5	33	5	45	5	56	20	5	Reward	B	26	5			47	5			55
	E	20	7	31	6	42	8	50	20	3			32	0	Reward	D	42	0			55
		A	20	15	31	14	43	14	57	20	15	Reward	E	29	18	Punish	C	35	18	Punish	F
11	B	20	17	29	17	38	18	48	20	20	Reward	C	24	18	Reward	D	42	18	Reward	E	47
	C	20	17	29	15	40	19	49	20	19			41	18	Punish	E	47	15	Punish	F	55
	D	20	20	26	20	32	20	40	20	18	Reward	F	26	20	Reward	B	42	20	Reward	A	57
	E	20	10	36	16	46	18	56	20	15			45	15			46	15			70
	F	20	15	31	15	42	16	54	20	15			45	15	Reward	C	54	15	Reward	D	38

Table 2 presents a summary of the data collected. Church size and attendance figures are compound annual congregational membership and attendance growth from data shared by the Presbyterian Church (U.S.A.) from 2008 to 2012. For the purposes of the Student's T test and Chi Squared test, congregations were divided into the binary categories of growing (G) or declining (D). Opting for a conservative approach congregations reporting a 0% or less compound annual growth in either membership or attendance are considered in decline. All others are designated as growing. Congregations were also separated into the binary categories of big (B) and small (S) depending on whether the congregation reports a total membership above or below 100, a number commonly used by sociologists studying congregations. Congregations with 100 members and below are considered small, and those above 100 are considered big.

I calculated individual statistics and group statistics for both Game 1 and Game 2. Individual statistics are reported in the yellow columns and group statistics are reported in the green. Individual scores report the total score of each individual after three rounds. Individual giving represents the average amount each player contributed over the three rounds. The reciprocity style derives from Adam Grant's categories of giver, taker, and matcher. Givers are designated as players who gave an average of 14-20 over three rounds, matchers gave an average of 7-13, and takers gave an average of 0-6. The group scores represent the mean of all the players in a session. I calculated the average group score by finding the average of the total individual scores. *Nota bene*, the



score reflects the rules of the game that multiply all contributions by 1.6 each round. The average giving shows the mean of the raw contributions over three rounds. The difference between the highest and lowest scores aims to measure inequality. I calculated this number by averaging the difference between the highest and lowest score for three rounds. Groups with higher numbers of elders played with larger spreads between the highest and lowest scoring players.

Statistics for Game 2 include all of the calculations described for Game 1 along with a few additional important calculations. In Game 2 the reciprocity style includes Grant's giver, taker, matcher styles calculated the same way as in Game 1, as well as a binary categorization playfully termed angel (A) and demon (D). Angels gave an average between 10-20; demons gave between 0-9.99. Reward and punishment percentages are also reported first for the group and then individually. The group reward and percentage averages are calculated as total instances of reward or punishment divided by the total number of opportunities each player had to punish or reward. The individual numbers are reported in the same way. Each individual had three opportunities to reward or punish; therefore, the individual numbers are 0%, 33.33%, 66.66%, or 100%.

These figures are reported in Table 2 below:

Table 2: Data Summary

Church Profile								Game 1						Game 2										
Church	Player Name	Membership % Chg	Attendance % Chg	Decline or Growth Attendance or Membership	Church Size	Church Attendance	Church Size: Big or Small	Individual Score	Individual Giving	Style: Giver, Matcher, Taker	Average Score	Average Giving	High/Low Difference	Individual Score	Individual Giving	Style: Giver, Matcher, Taker	Binary Style	Average Score	Average Giving	High/Low Difference	Purchase Rewards	Purchase Punishment	Individual Rewards %	Individual Punishment %
1	A	7	7	G	138	127	B	49	10.67	M	43.5	12.49	32.33	59	10.67	M	A	52.09	13.58	28.67	67	14	66	0
	B	7	7	G	138	127	B	42	13	M	43.5	12.49	32.33	51	10.33	M	A	52.09	13.58	28.67	67	14	33	33
	C	7	7	G	138	127	B	21	20	G	43.5	12.49	32.33	80	18.33	G	A	52.09	13.58	28.67	67	14	0	0
	D	7	7	G	138	127	B	30	17	G	43.5	12.49	32.33	47	18.67	G	A	52.09	13.58	28.67	67	14	66	0
	E	7	7	G	138	127	B	57	8	M	43.5	12.49	32.33	50	9.67	M	D	52.09	13.58	28.67	67	14	33	33
	F	7	7	G	138	127	B	32	16.33	G	43.5	12.49	32.33	40	15.67	G	A	52.09	13.58	28.67	67	14	0	0
	G	7	7	G	138	127	B	43	12.67	M	43.5	12.49	32.33	75	10.67	M	A	52.09	13.58	28.67	67	14	33	0
	H	7	7	G	138	127	B	69	4	T	43.5	12.49	32.33	36	18.33	G	A	52.09	13.58	28.67	67	14	66	0
	I	7	7	G	138	127	B	51	10	M	43.5	12.49	32.33	35	9.33	M	D	52.09	13.58	28.67	67	14	100	0
	J	7	7	G	138	127	B	51	10	M	43.5	12.49	32.33	50	9.67	M	D	52.09	13.58	28.67	67	14	33	33
K	7	7	G	138	127	B	34	15.67	G	43.5	12.49	32.33	50	15	G	A	52.09	13.58	28.67	67	14	33	0	
2	A	3	0	D	753	325	B	50	13.67	M	47.7	14.44	38.67	49	16	G	A	41.4	14.02	53	27	25	0	33
	B	3	0	D	753	325	B	49	14	M	47.7	14.44	38.67	31	16.67	G	A	41.4	14.02	53	27	25	33	33
	C	3	0	D	753	325	B	31	20	G	47.7	14.44	38.67	41	20	G	A	41.4	14.02	53	27	25	0	0
	D	3	0	D	753	325	B	41	16.67	G	47.7	14.44	38.67	11	14	M	A	41.4	14.02	53	27	25	33	66
	E	3	0	D	753	325	B	51	13.33	M	47.7	14.44	38.67	47	10	M	D	41.4	14.02	53	27	25	66	33
	F	3	0	D	753	325	B	46	15	G	47.7	14.44	38.67	71	14	M	A	41.4	14.02	53	27	25	0	0
	G	3	0	D	753	325	B	31	20	G	47.7	14.44	38.67	29	20	G	A	41.4	14.02	53	27	25	0	0
	H	3	0	D	753	325	B	61	10	M	47.7	14.44	38.67	59	10	M	D	41.4	14.02	53	27	25	0	0
	I	3	0	D	753	325	B	43	16	G	47.7	14.44	38.67	39	12.67	M	A	41.4	14.02	53	27	25	100	0
	J	3	0	D	753	325	B	44	15.67	G	47.7	14.44	38.67	42	15.67	G	A	41.4	14.02	53	27	25	66	33
	K	3	0	D	753	325	B	57	11.33	M	47.7	14.44	38.67	45	12	M	A	41.4	14.02	53	27	25	66	0
	L	3	0	D	753	325	B	58	11	M	47.7	14.44	38.67	53	9.33	M	D	41.4	14.02	53	27	25	0	66
	M	3	0	D	753	325	B	31	20	G	47.7	14.44	38.67	29	16	G	A	41.4	14.02	53	27	25	33	66
	N	3	0	D	753	325	B	58	11	M	47.7	14.44	38.67	-6	13	M	A	41.4	14.02	53	27	25	0	66
	O	3	0	D	753	325	B	51	13.33	M	47.7	14.44	38.67	64	15	G	A	41.4	14.02	53	27	25	33	0
	P	3	0	D	753	325	B	61	10	M	47.7	14.44	38.67	59	10	M	D	41.4	14.02	53	27	25	0	0
3	A	5	4	G	721	526	B	24	15	G	39.3	9.911	20	110	13.33	M	A	51.9	9.333	78.66	73	6	100	0
	B	5	4	G	721	526	B	30	13	M	39.3	9.911	20	86	9.33	M	D	51.9	9.333	78.66	73	6	100	0
	C	5	4	G	721	526	B	38	10.33	M	39.3	9.911	20	69	11	M	A	51.9	9.333	78.66	73	6	100	0
	D	5	4	G	721	526	B	40	9.67	M	39.3	9.911	20	43	9	M	D	51.9	9.333	78.66	73	6	33	0
	E	5	4	G	721	526	B	37	10.67	M	39.3	9.911	20	41	8.33	M	D	51.9	9.333	78.66	73	6	66	33
	F	5	4	G	721	526	B	44	8.33	M	39.3	9.911	20	45	7	T	D	51.9	9.333	78.66	73	6	100	0
	G	5	4	G	721	526	B	39	10	M	39.3	9.911	20	44	10	M	D	51.9	9.333	78.66	73	6	33	0
	H	5	4	G	721	526	B	49	6.67	T	39.3	9.911	20	33	7	T	D	51.9	9.333	78.66	73	6	100	0
	I	5	4	G	721	526	B	41	9.33	M	39.3	9.911	20	32	11.33	M	A	51.9	9.333	78.66	73	6	33	66
	J	5	4	G	721	526	B	46	7.67	M	39.3	9.911	20	82	8	M	D	51.9	9.333	78.66	73	6	66	0
	K	5	4	G	721	526	B	41	9.33	M	39.3	9.911	20	17	8.33	M	D	51.9	9.333	78.66	73	6	100	0
	L	5	4	G	721	526	B	41	9.33	M	39.3	9.911	20	32	8.67	M	D	51.9	9.333	78.66	73	6	66	0
	M	5	4	G	721	526	B	52	5.67	T	39.3	9.911	20	98	2.67	T	D	51.9	9.333	78.66	73	6	33	0
	N	5	4	G	721	526	B	45	8	M	39.3	9.911	20	42	8	M	D	51.9	9.333	78.66	73	6	100	0
	O	5	4	G	721	526	B	22	15.67	G	39.3	9.911	20	4	18	G	A	51.9	9.333	78.66	73	6	66	0
4	A	3	3	G	283	162	B	38	12.67	M	41.9	11.37	35.4	72	11.67	M	A	47.1	9.58	28	57	10	33	33
	B	3	3	G	283	162	B	42	11.33	M	41.9	11.37	35.4	29	10	M	D	47.1	9.58	28	57	10	33	33
	C	3	3	G	283	162	B	49	9	M	41.9	11.37	35.4	40	9	M	D	47.1	9.58	28	57	10	100	0
	D	3	3	G	283	162	B	52	8	M	41.9	11.37	35.4	39	8	M	D	47.1	9.58	28	57	10	33	0
	E	3	3	G	283	162	B	46	10	M	41.9	11.37	35.4	33	10	M	D	47.1	9.58	28	57	10	33	0
	F	3	3	G	283	162	B	30	15.33	G	41.9	11.37	35.4	51	9.33	M	D	47.1	9.58	28	57	10	100	0
	G	3	3	G	283	162	B	40	12	M	41.9	11.37	35.4	47	12	M	A	47.1	9.58	28	57	10	66	0
	H	3	3	G	283	162	B	28	16	G	41.9	11.37	35.4	40	5	T	D	47.1	9.58	28	57	10	66	33
	I	3	3	G	283	162	B	31	15	G	41.9	11.37	35.4	70	15	G	A	47.1	9.58	28	57	10	100	0
J	3	3	G	283	162	B	63	4.33	T	41.9	11.37	35.4	50	5.67	T	D	47.1	9.58	28	57	10	0	0	

Table 2 (continued)

Church Profile								Game 1						Game 2											
Church	Player Name	Membership % Chg	Attendance % Chg	Decline or Growth Attendance or Membership	Church Size	Church Attendance	Church Size: Big or Small	Individual Score	Individual Giving	Style: Giver, Matcher, Taker	Average Score	Average Giving	High/Low Difference	Individual Score	Individual Giving	Style: Giver, Matcher, Taker	Binary Style	Average Score	Average Giving	High/Low Difference	Purchase Rewards	Purchase Punishment	Individual Rewards %	Individual Punishment %	
5	B	3	3	G	55	53	S	34	10.67	M	37.8	9.31	18.09	52	11.67	M	A	44.4	10.25	24.5	46	13	66	0	
	C	3	3	G	55	53	S	48	6	T	37.8	9.31	18.09	48	10.33	M	A	44.4	10.25	24.5	46	13	33	0	
	D	3	3	G	55	53	S	31	11.67	M	37.8	9.31	18.09	69	12.33	M	A	44.4	10.25	24.5	46	13	33	0	
	E	3	3	G	55	53	S	47	6.33	T	37.8	9.31	18.09	55	5.33	T	D	44.4	10.25	24.5	46	13	66	0	
6	A	3	-5	D	69	42	S	42	15	G	46.2	13.61	17.33	70	15	G	A	55.5	13.61	29.67	61	11	66	0	
	B	3	-5	D	69	42	S	36	17	G	46.2	13.61	17.33	35	13.33	M	A	55.5	13.61	29.67	61	11	100	0	
	C	3	-5	D	69	42	S	50	17.33	M	46.2	13.61	17.33	58	15	M	A	55.5	13.61	29.67	61	11	66	0	
	D	3	-5	D	69	42	S	43	14.67	M	46.2	13.61	17.33	62	15	G	A	55.5	13.61	29.67	61	11	33	0	
	E	3	-5	D	69	42	S	46	13.67	M	46.2	13.61	17.33	51	13.33	M	A	55.5	13.61	29.67	61	11	33	33	
	F	3	-5	D	69	42	S	60	9	M	46.2	13.61	17.33	57	10	M	D	55.5	13.61	29.67	61	11	66	33	
7	A	-12	-7	D	490	263	B	47	11.33	M	43.3	12.57	11.67	49	12	M	A	44.5	12.43	26.33	50	23	0	66	
	B	-12	-7	D	490	263	B	48	11	M	43.3	12.57	11.67	57	12	M	A	44.5	12.43	26.33	50	23	100	0	
	C	-12	-7	D	490	263	B	50	10.33	M	43.3	12.57	11.67	33	12	M	A	44.5	12.43	26.33	50	23	66	33	
	D	-12	-7	D	490	263	B	51	10	M	43.3	12.57	11.67	55	10	M	D	44.5	12.43	26.33	50	23	66	0	
	E	-12	-7	D	490	263	B	42	13	M	43.3	12.57	11.67	49	12	M	A	44.5	12.43	26.33	50	23	33	33	
	F	-12	-7	D	490	263	B	42	13	M	43.3	12.57	11.67	39	14	M	A	44.5	12.43	26.33	50	23	100	0	
	G	-12	-7	D	490	263	B	37	14.67	M	43.3	12.57	11.67	34	15.67	G	A	44.5	12.43	26.33	50	23	66	33	
	H	-12	-7	D	490	263	B	43	12.67	M	43.3	12.57	11.67	61	9.33	M	D	44.5	12.43	26.33	50	23	0	33	
	I	-12	-7	D	490	263	B	34	15.67	G	43.3	12.57	11.67	34	13	M	A	44.5	12.43	26.33	50	23	33	33	
	J	-12	-7	D	490	263	B	39	14	M	43.3	12.57	11.67	34	14.33	M	D	44.5	12.43	26.33	50	23	33	0	
8	A	0	-1	D	47	36	S	35	12.67	M	41	10.67	19.67	35	11.33	M	A	50	9.785	36.67	52	5	100	0	
	B	0	-1	D	47	36	S	37	12	M	41	10.67	19.67	66	13	M	A	50	9.785	36.67	52	5	0	0	
	C	0	-1	D	47	36	S	58	5	T	41	10.67	19.67	59	7.33	T	D	50	9.785	36.67	52	5	100	0	
	D	0	-1	D	47	36	S	50	7.67	M	41	10.67	19.67	56	7	T	D	50	9.785	36.67	52	5	33	0	
	E	0	-1	D	47	36	S	38	11.67	M	41	10.67	19.67	30	11.67	M	A	50	9.785	36.67	52	5	0	33	
	F	0	-1	D	47	36	S	28	15	G	41	10.67	19.67	47	7.33	M	D	50	9.785	36.67	52	5	100	0	
	G	0	-1	D	47	36	S	41	10.67	M	41	10.67	19.67	57	10.67	M	A	50	9.785	36.67	52	5	33	0	
9	A	-2	-3	D	48	40	S	61	5.67	T	43.4	11.71	28.66	44	4.33	T	D	47.42	9.86	46.66	43	5	100	0	
	B	-2	-3	D	48	40	S	48	10	M	43.4	11.71	28.66	20	13.67	M	A	47.42	9.86	46.66	43	5	33	33	
	C	-2	-3	D	48	40	S	41	12.33	M	43.4	11.71	28.66	54	13	M	A	47.42	9.86	46.66	43	5	0	0	
	D	-2	-3	D	48	40	S	19	19.67	G	43.4	11.71	28.66	86	17	G	A	47.42	9.86	46.66	43	5	33	0	
	E	-2	-3	D	48	40	S	61	5.67	T	43.4	11.71	28.66	46	3.67	T	D	47.42	9.86	46.66	43	5	100	0	
	F	-2	-3	D	48	40	S	23	18.33	G	43.4	11.71	28.66	46	11.67	M	A	47.42	9.86	46.66	43	5	0	0	
	G	-2	-3	D	48	40	S	47	10.33	M	43.4	11.71	28.66	36	5.67	T	D	47.42	9.86	46.66	43	5	33	0	
10	A	-14	0	D	33	49	S	45	8.67	M	39.8	10.4	28.67	45	7	T	D	44.4	8.53	29.33	33	0	66	0	
	B	-14	0	D	33	49	S	33	12.67	M	39.8	10.4	28.67	54	10.67	M	A	44.4	8.53	29.33	33	0	0	0	
	C	-14	0	D	33	49	S	15	18.67	G	39.8	10.4	28.67	13	19	G	A	44.4	8.53	29.33	33	0	33	0	
	D	-14	0	D	33	49	S	56	5	T	39.8	10.4	28.67	55	5	T	D	44.4	8.53	29.33	33	0	33	0	
	E	-14	0	D	33	49	S	50	6	T	39.8	10.4	28.67	55	1	T	D	44.4	8.53	29.33	33	0	33	0	
11	A	-4	-3	D	204	116	B	57	14.33	M	50.7	15.7	13.67	52	17	G	A	53.17	17.05	23.33	50	22	33	66	
	B	-4	-3	D	204	116	B	48	17.33	G	50.7	15.7	13.67	47	18.67	G	A	53.17	17.05	23.33	50	22	100	0	
	C	-4	-3	D	204	116	B	49	17	G	50.7	15.7	13.67	55	17.33	G	A	53.17	17.05	23.33	50	22	0	66	
	D	-4	-3	D	204	116	B	40	20	G	50.7	15.7	13.67	57	19.33	G	A	53.17	17.05	23.33	50	22	100	0	
	E	-4	-3	D	204	116	B	56	14.66	M	50.7	15.7	13.67	70	15	G	A	53.17	17.05	23.33	50	22	0	0	
	F	-4	-3	D	204	116	B	54	15.33	G	50.7	15.7	13.67	38	15	G	A	53.17	17.05	23.33	50	22	66	0	

### 9.3 Analysis

While the public goods game study of Presbyterian Church (U.S.A.) leaders is a promising and interesting study, three caveats are important to announce at the outset of the analysis. The first caveat regards the small sample size and lack of randomness. Given the limitations of time and resources most of the congregations participating in the study reside in the Pacific Northwest. Sociologists like Patricia O'Connell Killen document the uniquely open religious *habitus* of the Pacific Northwest.<sup>227</sup> While one quarter of the congregations studied represent the geographic southeast, it is possible that some of the behavior observed in this study pertains more to the Pacific Northwest than other regions of the United States. Further study would be helpful in learning more about the possible effect regional differences might play in congregational behavior.

A second caveat is related to the first and concerns the cultural differences between social liberals and conservatives regarding fairness. In *The Righteous Mind: Why Good People Are Divided by Politics and Religion* Jonathan Haidt demonstrates the different ways in which social conservatives and liberals tend to understand the meaning of fairness. Social conservatives view fairness primarily as proportional: the person who does the work should benefit from the work.<sup>228</sup> Social liberals on the other hand emphasize the equality of fairness: fairness means on principle that the few should not

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<sup>227</sup> Patricia O'Connell Killen, *Religion and Public Life in the Pacific Northwest: The None Zone* (Walnut Creek, CA: AltaMira Press, 2004), 10, Kindle.

<sup>228</sup> Haidt, *The Righteous Mind*, Kindle locations 2491-2493.

have vastly more than the many regardless of how much work is done.<sup>229</sup> This study did not assess congregational levels of social liberal or conservative views of fairness, but anecdotal information garnered from contact with the leaders leads me to suspect that different views of fairness might correlate strongly to how leaders play these games. The significance of this association is that pastoral leaders may need to exercise great care regarding how the vision of fairness might shift dramatically in different congregational contexts.

A third caveat concerns the lack of laboratory conditions and financial incentive. Although there is some debate, many economists distrust experiments conducted in the field and experiments conducted without financial incentive.<sup>230</sup> Trials of the public goods game conducted with church members previous to the study offer anecdotal evidence that game behavior reflects actual behavior without the need for financial incentive. Yet, one of the hallmarks of public goods games is a breakdown of cooperation in the absence of the ability to reward, punish, or communicate. The elders participating in this study did not show a decrease in cooperation in the first game, which casts some doubt on how effectively the first game reflects real behavior. As nice as many church leaders are, every shepherd knows that sheep bite; and it is unlikely that church leaders are somehow less susceptible to self-interest than the population at large.

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<sup>229</sup> Haidt, *The Righteous Mind*, Kindle locations 2491-2493.

<sup>230</sup> Ariel Rubenstein, "Rubenstein on Game Theory and Behavioral Economics," *Econ Talk*, accessed January 17, 2014, [http://www.econtalk.org/archives/2011/04/rubinstein\\_on\\_g.html](http://www.econtalk.org/archives/2011/04/rubinstein_on_g.html).

Given that the real emphasis of this study is placed on the use of reward and punishment, though, this doubt does not invalidate the results of the whole study. Rather, these findings suggest that further study with financial incentives could be extremely interesting.

Regarding the evidence itself: at first the statistical results appear to disappoint with regard to trust and growth. The key hypothesis, that congregational growth will positively correlate with higher levels of trust as evidenced by high scores during the game, is weak when analyzing play for all churches. The total average score after three rounds of play in the second game offers the best measure of trust since it is a composite of amounts given and also depicts whether players chose to punish or reward other players. The correlation between growth and total score in the total population as measured by the total average score after three rounds of play in the second game is weak and statistically insignificant ( $r = 0.272$ ,  $p = 0.42$ ). (See Figure 1.)

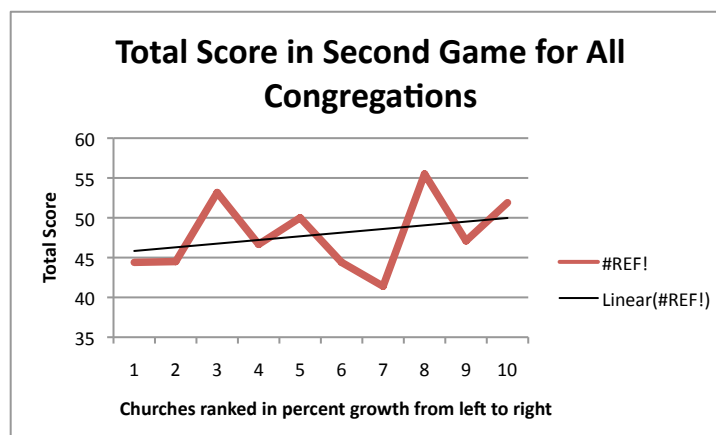


Figure 1: Total score in second game for all congregations

Moreover, the second most important factor for which I was testing was a positive correlation between growth and reward and a negative correlation between growth and punishment. Martin Nowak's maxim that those who punish, perish draws upon the observational data of groups playing the same version of the second public goods game in which groups that created the conditions for cooperation to thrive without punishment thrived in comparison to groups who used punishment. For all congregations there was positive correlation ( $r = 0.51$ ,  $p = 0.11$ ) between growth and reward approaching the significance of a trend. (See Figure 2.) But, there was an insignificant relationship between punishment and growth ( $r = 0.05$ ,  $p = 0.88$ ). (See Figure 3.)

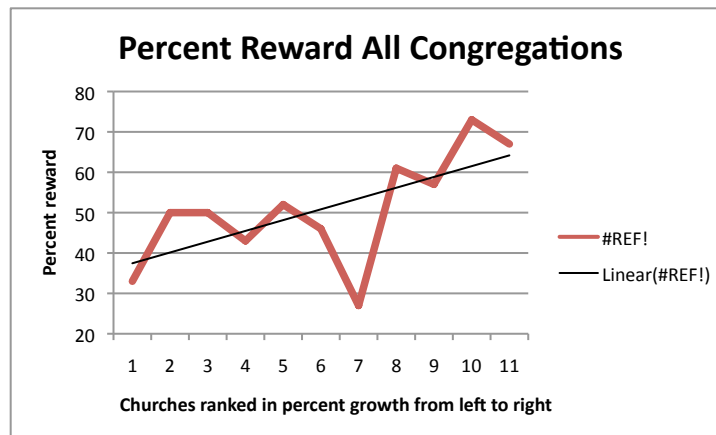
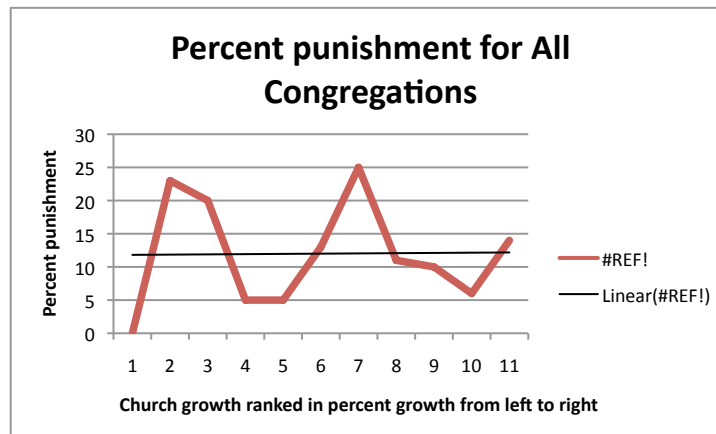


Figure 2: Percent reward all congregations



**Figure 3: Percent punishment for all congregations**

Far more suggestive is what happens when churches with populations over 100 are viewed apart from churches with populations under 100. Scholars such as Cynthia Woolever and Deborah Bruce have shown in detail that congregational size significantly shapes the strengths congregations have; these findings further show how small churches differ from their larger counterparts.<sup>231</sup> Due to the distribution between larger and smaller churches in the mainline church, 94% of mainline congregations average less than 350 in attendance with over half of these churches averaging less than 100 members. Yet, most worshippers attend larger membership congregations; understanding these differences is incredibly important.<sup>232</sup>

The data on larger membership congregations, churches with populations over 100, indicate a much stronger relationship between growth, reward, and lack of

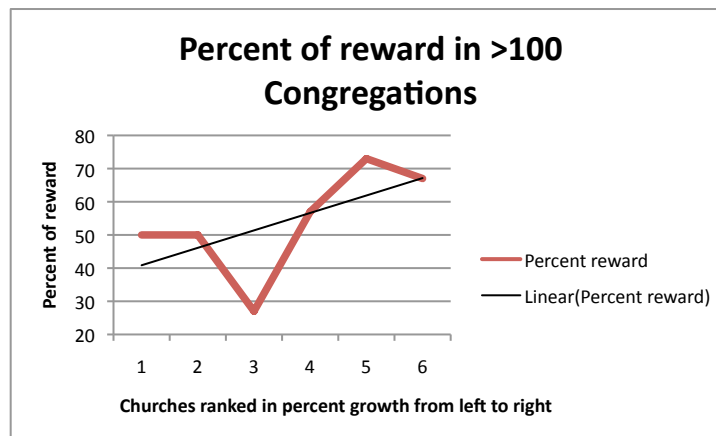
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<sup>231</sup> Cynthia Woolever and Deborah Bruce, *Beyond the Ordinary: 10 Strengths of U.S. Congregations* (Louisville: Westminster John Knox Press, 2004), 19.

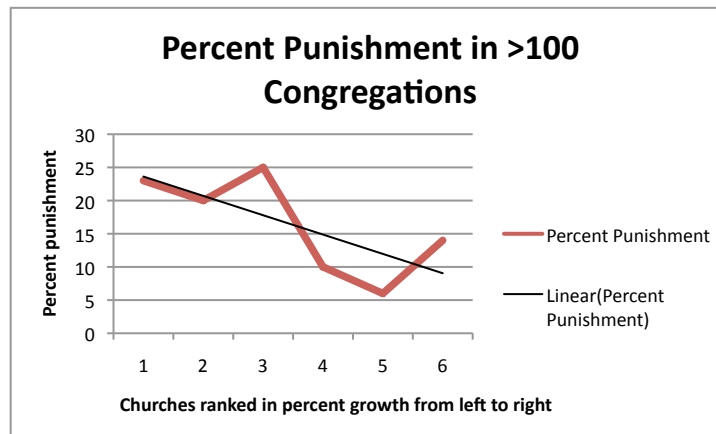
<sup>232</sup> Carroll, *God's Potters*, 62.



punishment. Although statistically insignificant the coefficient for membership growth and reward is somewhat strong ( $r = .31$ ,  $p = .55$ ). The relationship between attendance growth and reward is even stronger ( $r = .53$ ,  $p = .28$ ). (See Figure 4.) More data could strengthen this relationship. Conversely, the relationship between growth and punishment is negative ( $r = -0.6$ ,  $p = 0.2$ ); the coefficient for attendance growth and punishment is even more strongly negative ( $r = -0.72$ ,  $p = 0.1$ ) and approaches the level of a trend. (See Figure 5.) Thus, in line with Nowak's findings, larger growing churches in this study exhibited comparatively low levels of punishment.



**Figure 4: Percent of reward in >100 congregations**



**Figure 5: Percent punishment in >100 congregations**

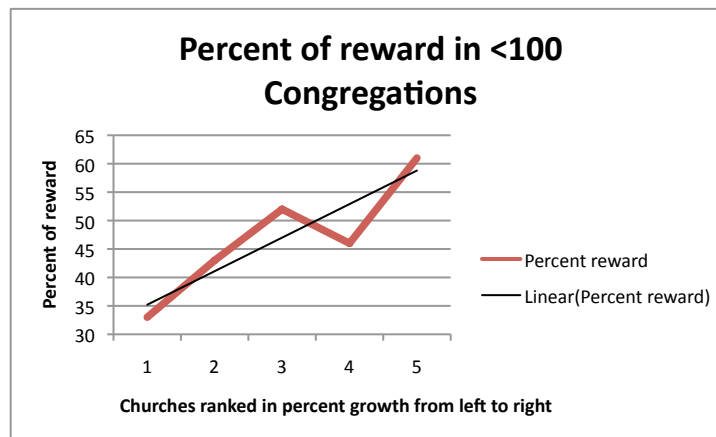
Anecdotally, observation bears these data out. The session of one larger Southern church gave at the highest average levels of any larger congregation. Elders gave an average of 14.44 units during the first game and 14.02 units during the second, the second highest average of any group in the study. Yet, their total score after playing three rounds of the second game was the lowest of any of the larger churches at 41.4. This low total score was entirely due to the degree to which elders punished one another. This session languished under a 25% rate of punishment, a rate that tied for the highest level of punishment observed. Disturbingly, when one of the elders with the lowest contribution rates was punished by other players, this player lashed out with punishment not directed at the punishing players but at a player with the highest levels of contribution. This behavior suggests retribution and contempt for the group.

In contrast, one larger church in the Northwest contributed at the lowest level for all churches observed. The session of this church gave an average of 9.911 during the

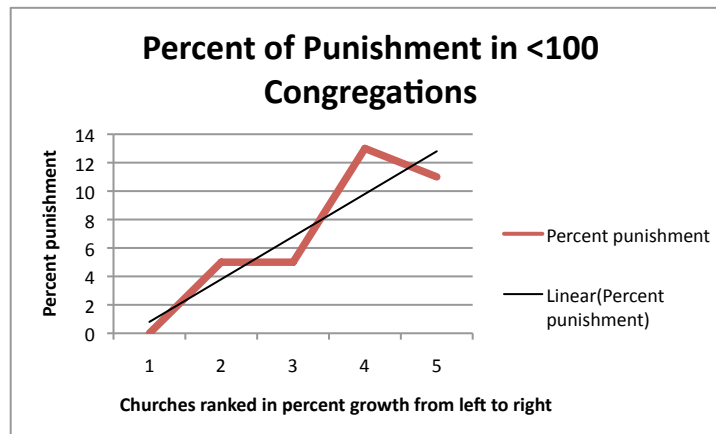
first game and 9.333 during the second game, the second lowest averages in the study. Yet, this session outscored the Southern session with a total score of 51.9 after three rounds. The success in the game of the Northwest church was due to their extremely low punishment rate of 6% and the highest reward levels observed at 73%. Most interestingly, one of the elders in the Northwest boycotted the game early in the second game. The elder chose not to contribute anything to the group eschewing either reward or punishment. Yet, in response to this low contribution level the other elders of the Northwest church avoided punishing him and even tried to induce his participation by rewarding him. When it comes to larger institutions, these data suggest that Nowak's maxim is accurate: those who punish, perish. These results seem to suggest that larger institutions may be better off by seeking creative ways to encourage cooperation among members and avoiding punitive behavior as much as possible.

The story with smaller membership congregations also becomes clearer when separated out from the entire population. The correlation between growth and total score is moderately strong ( $r = 0.51$ ,  $p = 0.37$ ), although as with larger congregations the high  $p$  value rules out the significance of this relationship. Similar to larger membership congregations there is a link between growth and the willingness to reward that exceeds the level of a trend ( $r = .83$ ,  $p = .08$ ). (See Figure 6.) The real story with smaller membership congregations in comparison to larger membership congregations, however, lies in the willingness of leaders to punish one another. While in larger

membership congregations punishment is strongly negatively correlated to growth, in smaller membership congregations these data show it is just the opposite. There is a very strong positive relationship between growth and punishment in smaller congregations ( $r = 0.89$ ,  $p = 0.046$ ). (See Figure 7.) So, while larger membership congregations may be wise to eschew punitive behavior, it is possible that smaller membership congregations may want to ask themselves hard questions about whether they need to take steps to make free-riding behavior more costly.



**Figure 6: Percent of reward in <100 congregations**



**Figure 7: Percent of punishment in <100 congregations**

This strong correlation between punishment and growth in smaller congregations may come about due to the social pressure to be agreeable in smaller congregations where leaders have a harder time getting away from one another. Smaller churches experiencing growth may have leaders willing to push back on one another, and churches experiencing decline may have leaders unwilling to say hard truths to one another. Grant cites a study on negotiation comparing couples in relationship with strangers in various negotiation situations. The researchers hypothesized that couples would perform at higher levels in the study due to the closeness of their relationship. The opposite turned out to be the case. Couples negotiated less well than strangers, and couples reporting higher levels of love did worse than couples with lower levels. The researchers concluded that the couples often failed to be honest with one another, preferring to protect the relationship rather than being honest enough with one another to negotiate well. Grant writes: "Concern for their partners had the effect of 'short-

circuiting efforts to discover integrative solutions in favor of more accessible but less mutually satisfactory outcomes,' the researchers write, leading to a 'kid gloves' approach to problem solving."<sup>233</sup>

The inequality dynamic emerged as a surprise during the research. After studying one of the small membership congregations, a participant shared with me her experience of frustration in the game as a high contributor who was first rewarded and later punished for this behavior. She noted that the group seemed to show a concern for inequality, rewarding players with low total scores and punishing players with high scores. After examining the patterns it appears the participant was correct. Rather than individuals playing the game to win, this session seems to have played the game with a view to keeping a low gap between the highest and lowest scoring players. By calculating the average difference between the highest and lowest scoring players in both games, several other sessions also seemed to play with this unspoken goal in mind. While these sessions were successful at reducing the difference between the score of the highest and lower players, they also generated confusion and resentment in the process by rewarding and then punishing the same player. It is possible that this game behavior models a real concern in church communities regarding tolerance for some members being too visible in their leadership. If this connection is true, communities less tolerant of inequality may not provide sufficient support for some of their best leaders.

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<sup>233</sup> Grant, *Give and Take*, 196.

In this study smaller membership congregations manifested a greater intolerance for inequality than larger membership congregations; and in the population as a whole, even though inequality was not a strong predictor of growth, the data suggest that congregations experiencing more growth tend to be more comfortable with inequality. But, as with total score and punishment percentages inequality manifested differently for smaller membership congregations than for larger congregations. For larger membership congregations the congregations experiencing the most growth show the greatest tolerance with inequality ( $r = 0.73$ ,  $p = 0.01$ ). (See Figure 8.) However, with smaller membership congregations the opposite is true. The faster-growing smaller congregations were very much less tolerant of inequality ( $r = -0.79$ ,  $p = 0.1$ ). (See Figure 9.)

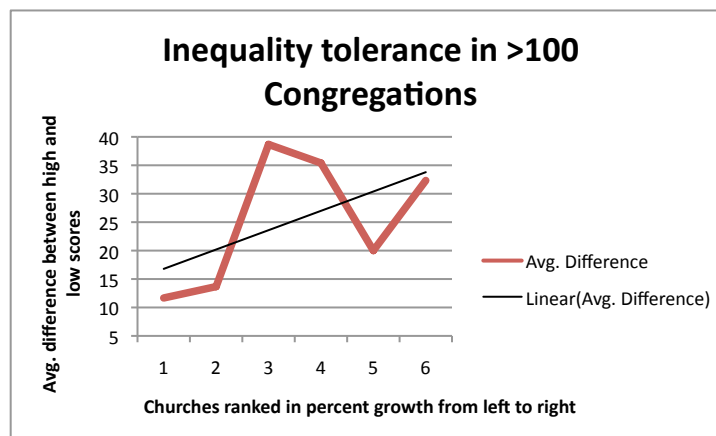
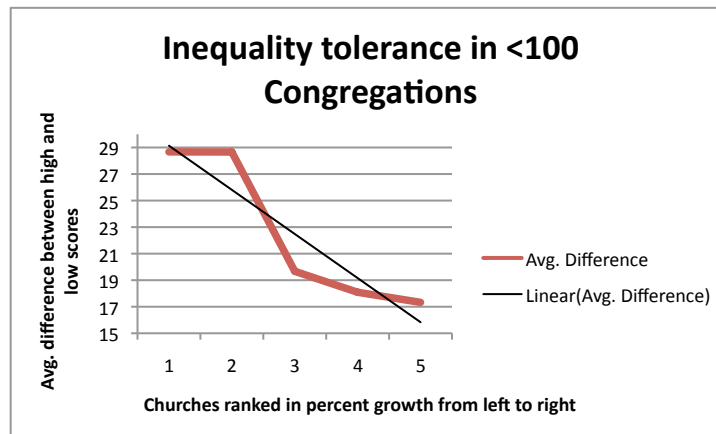


Figure 8: Inequality tolerance in >100 congregations



**Figure 9: Inequality tolerance in <100 congregations**

Before the study I hypothesized that if churches experiencing decline still showed high levels of trust in the game that the reason for this behavior might be due to bonding capital. Bonding capital may well help to explain this interesting pattern with inequality. Assuming the bonding capital between members is lower in a larger institution, it makes sense that larger churches are both more tolerant of inequality and that faster-growing churches show even greater tolerance. This willingness to tolerate inequality will enable these churches to offer a high level of support to leaders showing an unusually high level of activity. However, in a smaller membership congregation greater bonding capital may decrease a congregation's willingness to tolerate leaders standing above the rest. Leaders who excel may be viewed as doing too much, and their efforts, while positive, may still create unwelcome tension. In this sense it makes sense that smaller communities experiencing more growth also show less inequality as inequality itself is experienced as a negative strain. If this explanation is the case, then



smaller membership communities in particular need to exercise care with their most active leaders. On the one hand the community may need to learn how to support these very active leaders, but on the other hand it is possible that pastoral leadership may need to find ways to help standout leaders continue to contribute without being quite as visible.

To shed further light on the relationship between growth, decline, and game performance I analyzed the results in terms of the 98 individual results as well as by congregation. To do this analysis I divided congregations into two categories: growing versus declining. I defined a congregation as declining using the lower of the two membership and attendance percentage growth numbers; if a congregation experienced 0% growth or negative growth, I considered them to be a declining congregation. Having divided the congregations into two clear groups, I then performed a Student's T test on the two groups measuring the total score in Games 1 and 2, and measuring for reward and punishment percentage.

First, I found statistically significant relationships for every variable. Interestingly, individuals in declining populations gave more than individuals in growing populations in both games. In Game 1 the average giving of individuals in declining populations was 13.15 where average giving in growing populations was 10.89 ( $t = 2.894$ ,  $p = .005$ ). This relationship continued in Game 2 where individuals in

declining populations gave an average of 12.5 units and individuals in growing populations gave an average of 10.59 ( $t = 2.347$ ,  $p = .021$ ).

The relationship between reward and punishment behavior by individuals in declining and growing populations is equally clear and significant. Individuals in growing populations rewarded more and punished less. In terms of rewarding behavior individuals in declining populations show a 42.56% average rate of reward, while individuals in growing populations show a 59.05% average rate ( $t = -2.33$ ,  $p = .022$ ). The opposite was true for punishment: individuals in declining populations experienced a 15.5% rate of punishment, while individuals in growing populations enjoyed a rate of 7.2% ( $t = 1.99$ ,  $p = .049$ ).

This relationship between reward and punishment behavior is the strongest evidence yet to support Nowak's hypothesis that growing populations can create the conditions for cooperation to flourish in the absence of punishment. Individuals in growing populations rewarded more than leaders in declining populations in this study, and conversely, individuals in growing populations punished at less than half the rate of leaders in declining populations. The fact that leaders in declining populations gave more generously than leaders in growing populations is somewhat puzzling. I would have guessed that leaders in growing populations would trust one another more and exhibit this trust by contributing more units to the game, which is clearly not the case, however.

Perhaps the reason leaders in declining populations gave more generously than leaders in growing populations has to do with Grant's categories of givers, takers, and matchers. Lower levels of giving suggest that leaders in growing congregations give with the more wary eye of the matcher. They are willing to reward more generously than individuals leading declining populations, but perhaps by giving less they want to ensure that other leaders are doing their part. Leaders in declining congregations give more; but, perhaps like some of the givers Grant describes, their high levels of giving expose them to taking behavior, which might also explain their comparatively high level of punishment. Perhaps, hell hath no fury like a giver scorned.

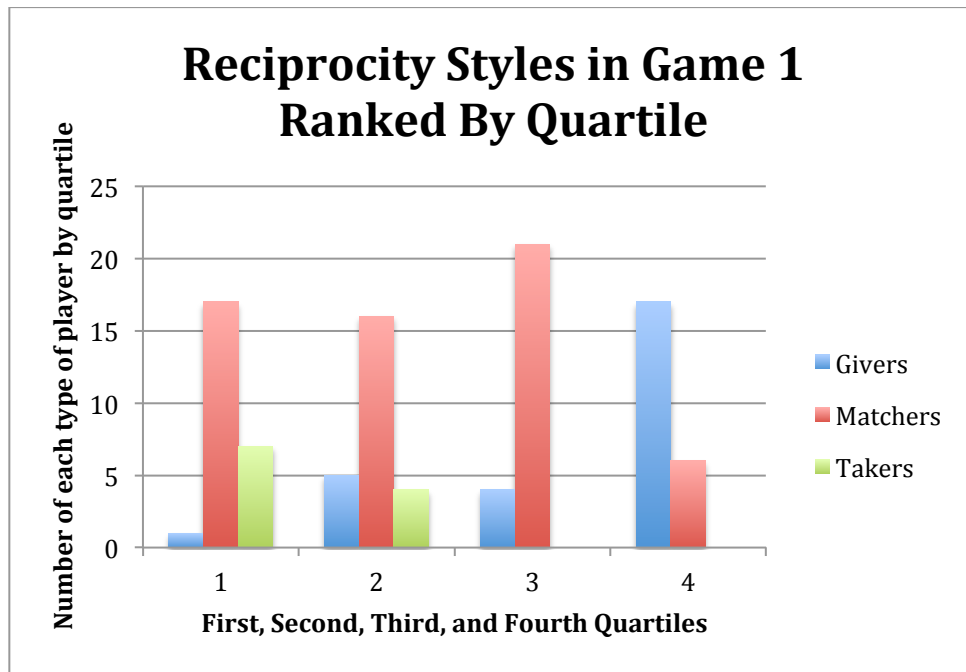
To test for the influence of giving style I divided the populations by reciprocity style. I designated individuals who gave an average of 15-20 units as givers, I designated leaders who gave an average of 7-14 units as matchers, and I termed individuals who gave between 0 and 6 takers. I analyzed givers, takers, and matchers using reward and punishment percentages based on performance in Games 1 and 2 using the Chi Squared test. While the results of the reward conditions were not statistically significant, the results of the punishment conditions using the performance in Game 1 fell within the level of a trend ( $p = 0.079$ ). These results do not allow us to say that more givers exist in growing populations, and more takers exist in declining populations. What we can say is that the distribution of reward percentage is spread fairly evenly for givers, takers, and matchers; however, in terms of punishment givers and matchers are responsible for

nearly all of the punishment taking place. Those designated as takers in the first game exhibited no punishing behavior at all in the second game while nearly a tenth of givers and matchers punished at a rate of 100%. More individuals designated as takers in the second game chose to punish, but aside from these outliers the pattern held: everyone rewards, but givers and matchers are far more likely to punish.

This pattern does not explain exactly why leaders in declining congregations give higher average amounts while rewarding less and punishing more. It does, however, suggest that leaders should be wary of punishing behavior and wise to eschew excess giving in favor of a matching stance when they think about designating time, talent, and treasure to the bodies they serve. Like Jesus telling the disciples to leave unwelcoming places by shaking the dust off their feet, these games suggest that leaders of healthy, vital institutions are willing to give, but exercise caution in their giving and are willing to move on from frustrating situations without resorting to punishing behavior.

What becomes very clear from the reciprocity style analysis is the effect reward and punishment have on the game. I ranked players by total score and giving style for both games and separated them into four quartiles. In Game 1 givers barely make it into the first quartile comprising just 4% of the top group with matchers and takers dominating. The opposite is the case with the bottom quartile that has 74% givers, 26% matchers, and not a single taker. In the absence of reward and punishment, matchers

and takers thrive while givers are pushed to the bottom. Given the crucial importance of givers for group health this pattern is not good to see. (See Figure 10.)



**Figure 10: Reciprocity styles in Game 1 ranked by quartile**

In stark contrast when leaders play with the ability to reward and punish, an entirely different picture emerges. In the reward and punishment condition the presence of givers in the first quartile doubles to 8%, and an equal percentage of givers populate the second, third, and fourth quartiles with 24%. Twenty-four percent of givers in the fourth quartile in the second version of the game is a dramatically different distribution than the 74% of givers filling the fourth quartile in the first version of the game. Takers are also pushed to the middle two quartiles in the second version of the game. In Game 1 most of the takers, 28% of them, reside in the first quartile, but in Game 2 only 8%

make it to the top. Given the prevalence of reward over punishment these data suggest that interactive relationships characterized by generous use of giving along with judicious punishment, particularly in smaller membership congregations, create the space needed to discourage taking behavior and allow healthier giving and matching styles to thrive. (See Figure 11.)

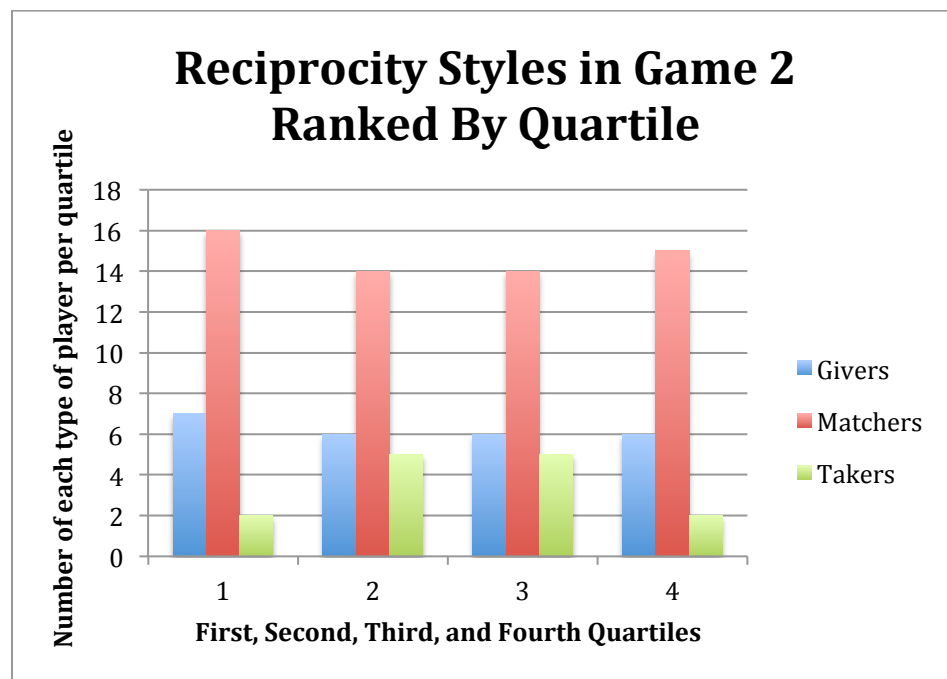


Figure 11: Reciprocity styles in Game 2 ranked by quartile

## 10. Summary

Pairing the insights of cognitive psychology, behavioral economics, and theology may seem novel, but in an important way this work is simply an attempt to shed further light on what the church has confessed since Chalcedon: Christ is fully divine and fully human. Behavioral insights help us understand with growing experimental precision the sometimes surprising complexity of human nature. These insights aid theologians in describing theological anthropology and sin; they also provide biblical exegetes tools to interpret scripture in a way that affirms the integrity of Christ's humanity. Behavioral theology gives leaders language and an identity as choice architects to reflect on their practice, and it presses leaders to ask whether their decisions are taking into consideration the full humanity of the church. Such a theology will humble leaders and require us to be mindful of the cognitive biases we bring to every situation; but, more importantly, such a theology will free us to engage our ministry contexts with a more playful and experimental attitude.

Applying behavioral game theory to church settings allows us to add to the lively discussion about church growth. To be sure Mark Chaves and other sociologists rightly demonstrate how demographics explain much of church growth and decline. And yet, leadership makes a difference. Pastoral leadership makes a difference, and this public goods game study of Presbyterian sessions indicates that congregational leadership makes a difference, too. To summarize the more important findings: leading

a larger membership congregation is very different than leading a smaller membership congregation. Leaders of larger congregations should exercise the greatest possible caution regarding punitive behavior. Positive, rewarding behavior marks growing larger membership congregations. I am not saying that larger membership congregations should overlook conflict, rather I am suggesting that larger membership leaders should think carefully before becoming entangled in situations that may unravel emergent cooperation. In smaller membership contexts positive, rewarding behavior is just as important as it is in their larger counterparts, but in smaller membership contexts the leaders of growing congregations used more punishment in the games. I hypothesized that this behavior is not punitive behavior so much as it reflects leaders exercising healthy discipline on members who were not adding to the community. In an actual situation this healthy discipline might look like elders expressing honest disagreement by speaking the truth in love when it is often easier in tight living quarters to keep one's thoughts to oneself.

This study also indicates that leaders should reflect carefully on how they see inequality in their context. Larger membership congregations generally played these games with a far greater tolerance for inequality suggesting that in real life these churches might be able to support standout leaders. Smaller membership congregations, on the other hand, played these games with less tolerance for inequality suggesting that in actual church settings these smaller churches might exhibit more anxiety if some



leaders are perceived as too high or too low. Pastors of smaller membership congregations may be wise indeed to support and protect unusually gifted leaders in situations where many are likely to be uncomfortable with such high-profile leaders.

The most important conclusion is that this study should be seen as a comma rather than a period: more work needs to be done to understand the relationship between the church and games such as the public goods game. While the Student's T test resulted in statistically significant findings using the power of the individual data, eleven congregations was not a large enough sample to produce many significant correlations. However, the insights that I gleaned are interesting and stimulating. Further, the iterations on this study are endless. Using the same game structure a future experiment could be conducted with more congregations using financial incentives to compare congregations playing with and without incentives. This study did not analyze how culture, gender, or political leaning might affect the way different sessions play. It is highly possible that what is viewed as punitive behavior in one area of the country might not be viewed as punitive in another. These games are easy to play, and many of the leaders reported their personal interest and enjoyment. My hope is that this study encourages more like it to add to the body of behavioral knowledge in church settings.

## **Appendix A: Study Design**

The Duke University Institutional Review Board (IRB) approved the following research protocol on May 30, 2013.

### ***1. Research Design***

I will study the way Presbyterian Church (U.S.A.) leaders in numerically declining, stable, and growing congregations play two versions of a public goods game, in order to determine whether there is correlation between trust and growth. I will rely on the national PC(USA) database to determine numerically declining, stable, and growing congregations. Each version will be twenty rounds long. To protect from the shadow of the future the number of the rounds will be kept secret.

After obtaining consent from each study participant, game instructions will be read before play begins. After a time for questions and clarification, players will observe silence. Following the classic public goods game, each participant will be given 20 units, defined by each player as time, money, or energy, which they will then privately decide to contribute to a common pot or keep to themselves. Each unit shared in the common pot will be multiplied by 1.6. The multiplied pot will be divided equally among the players. After each round the actions of each participant will be shared anonymously, and a new round will begin. In this version of the public goods game cooperation tends to break down. Breakdown in cooperation should occur at different rates with groups

experiencing higher levels of trust and cooperation maintaining higher collective scores over a longer period of time.

In the second version of the game a private stage of action is added. After each individual decides how much to share, and the units are multiplied and returned, each individual will be given another choice: whether to reward, punish, or remain neutral toward the other participants. In this second round each player may choose to spend 4 of their units in order to either reward another player, giving this other player an 12 additional units, or punish a player, taking away 12 units. The player may not reward or punish themselves. If a player has a negative number of units due to ex ante punishment they must contribute 0 units and may not choose to reward or punish. After all private actions are taken, the next round begins.

This version of the game tests the disputed question regarding punishment and cooperation. Traditionally, theorists like Robert Axelrod, Ernst Fehr, and Simon Gächter argue that some punishment is necessary to maintain cooperation in a public goods environment. Fehr and Gächter use the term 'altruistic punishment' to describe costly punishment designed to discourage free-riding behavior, which is necessary to maintain cooperation in a public goods environment. Martin Nowak, on the other hand, points out that while altruistic punishment does create cooperation, such behavior is costly to the group overall. Nowak suggests that the highest scoring groups rely on trust and

positive reinforcement to create the conditions for cooperation to emerge. Thus, Nowak's maxim: punish *and* perish.

After the games are played, the subjects are invited to respond to two questions regarding their experience of trust as leaders. They are asked what behaviors or events have strengthened their sense of trust, harmed their sense of trust, and they will be asked to assign an objective number to their perception of the trust level present in their leadership body.

## **2. Subject Selection**

The subject population are teaching and ruling elders in the Presbyterian Church (U.S.A), men and women elected by their congregations to lead. Using national statistics regarding growth and the compound annual growth formula, I will study congregations experiencing numerical decline, stability, and increase.

I hope to study ten congregations in each category. The subjects will be composed mainly of churches in Oregon, Washington, North Carolina, and Texas. I will recruit these subjects by asking for time on the docket of their monthly meeting.

## **3. Risks and Benefits**

It is possible the subjects might experience feelings of concern and dismay if they experience other leaders playing the games in uncooperative or punishing ways. But

given the brief and abstract nature of the games, I believe the risk of harm is low. On the other hand I believe it is possible the governing bodies may learn something about one another and about how they relate by playing the game. I think it is likely that some leaders will gain some insight about the importance of cooperation and finding non-punishing ways of developing cooperation.

#### **4. Confidentiality**

Personal information will not be used in scoring the games. I will mark the players down using only their initials. I will store this information both in hard copy and on a hard drive until the thesis is completed. When various sessions will be discussed in the research, their congregations will not be named. The churches will be described without identifying details, i.e. "one session leading a smaller, rural congregation in the Pacific Northwest experienced a high level of trust."

#### **5. Compensation**

No compensation will be given.

#### **6. Informed Consent**

Duke's informed consent will be used. The script that will be read to the participants and the statement are attached.

## **7. Deception**

No deception will be used.

## **8. Debriefing**

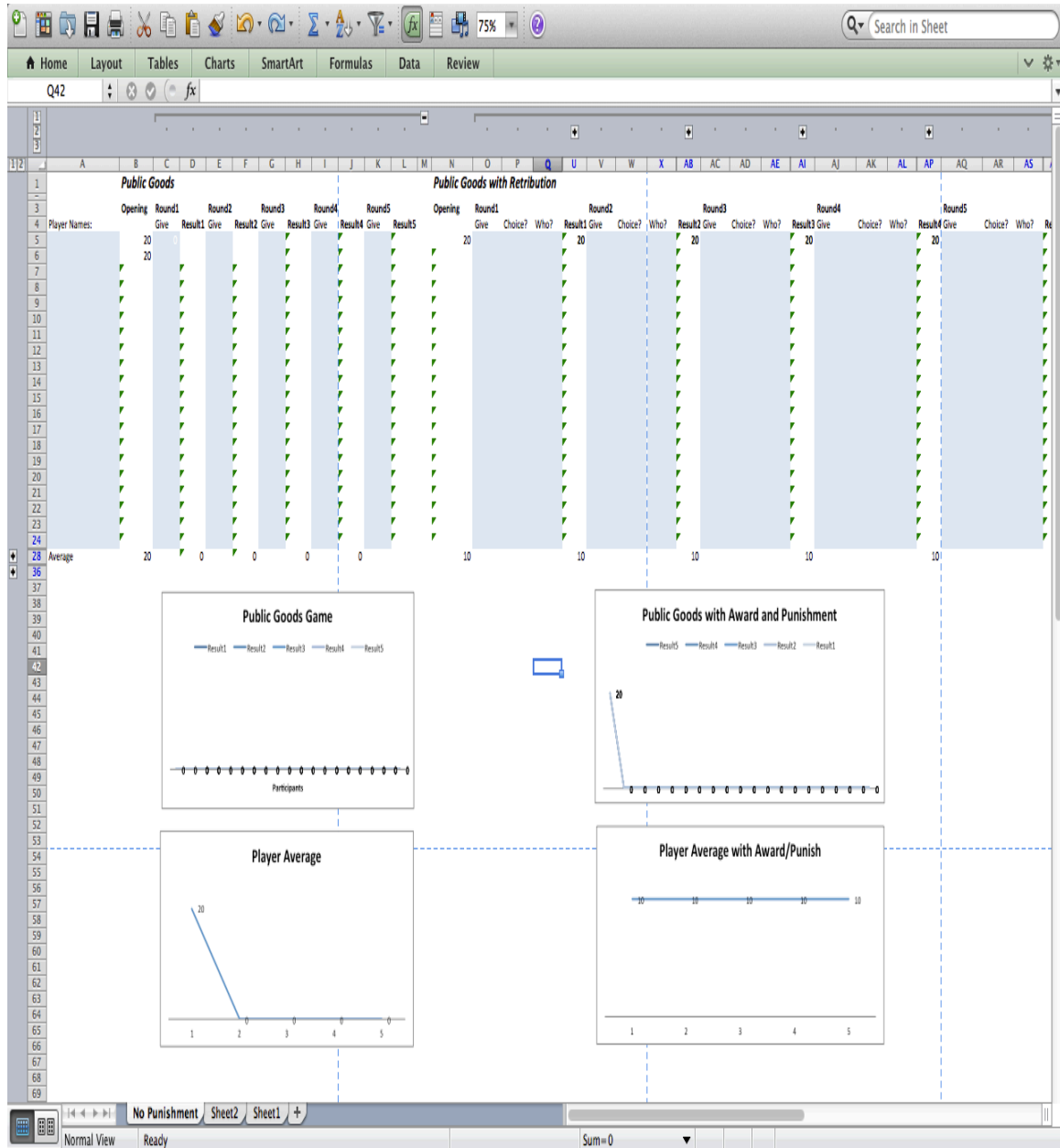
No debriefing is needed due to lack of deception.

## **9. Appendices**

- A. Excel tool used for calculating game and projecting results
- B. Script explaining the research and the rights of the participants.
- C. Response sheet handed out to participants.
- D. Consent form.
- E. Sample recruitment form

## IRB Appendices

### Appendix A: Excel tool for calculating and projecting



## **Appendix B: Scrip**

### **Public Goods Game Instructions**

#### **Instructions for the First Game:**

In the first version of the game each player will begin with 20 units. I invite you to think of these units as time, energy, or financial resources you might give to your community in your role as an elder. At the beginning of each round every player will privately write down how many units they are willing to offer. When everyone has decided and written down their amount, I will come by and record your choice. I will then enter all of the decisions into a spreadsheet I am projecting for the group to see. The players will be designated 'A', 'B', 'C', and so forth. Because the recording sheets you are using will be randomized, you will have perfect knowledge of all decisions made, but you will not know the personal identity of the players. All of the amounts will be added together, multiplied by 1.6, and then divided equally and returned to each player. For example in a game of 8 players, if each player gave every unit, after the units were added together, multiplied by 1.6, divided equally and returned, all players will benefit and end the round with 32 units. However, trust factors into the game, because players are able to donate little and still benefit. In the same game of eight people, if seven players donate 20, and one player donates 0, the seven players will wind up with 28 units while the player who donated nothing will have 48, nearly double the amount of



those who contributed. This game will be played for several rounds, and you will have the opportunity to see how much each player contributes and the total number of units each player is given at the end of each round.

We will begin with a practice round. This round does not count against your score and will not be recorded as part of the study. It is simply for you to gain a feel for the game. Feel free to talk during the practice round and ask questions, but when the game begins I will ask everyone to observe silence.

*[The game is played.]*

#### **Instructions for the Second Game:**

The second version of the game is just like the first, only players will have an additional step. After each player writes down how many units they are willing to contribute, players are also given the opportunity to reward or punish another player. A player may spend 4 units to reward another player with 12 additional units. Or, a player may spend 4 units to deduct 12 units from another player. Players may not reward or punish themselves and may choose to reward only one other player per round. As before, when everyone has made their decisions, I will come by and record your choice or choices. I will then enter all of the decisions into a spreadsheet I am projecting for the

group to see. The players will be designated 'A', 'B', 'C', and so forth. Because the recording sheets you are using will be randomized, you will have perfect knowledge of all decisions made, but you will not know the personal identity of the players. Players do not have to reward or punish other players. This game will also be played for several rounds. If a player has negative units because of previous punishment, they must choose to give 0 units and may not reward or punish another player.

As before we will play a practice round that will not count against your score. After the practice round, we will begin and observe silence for as many rounds as we play.

## Appendix C: Recording Sheet

### Public Goods Game Recording Sheets\*

	<u>Units</u>
Practice Round:	_____
Round 1:	_____
Round 2:	_____
Round 3:	_____
Round 4:	_____
Round 5:	_____
Round 6:	_____
Round 7:	_____
Round 8:	_____
Round 9:	_____
Round 10:	_____
Round 11:	_____
Round 12:	_____
Round 13:	_____
Round 14:	_____
Round 15:	_____

\* Although the number of rounds possible on this recording sheet is 15, the actual number of rounds will differ. For the sake of realism the number of actual rounds will not be disclosed to the players. (This language will be removed from the actual sheets.)

	<u>Units</u>	Punish/Reward?	Player Name?
Practice Round:	_____	_____	_____
Round 1:	_____	_____	_____
Round 2:	_____	_____	_____
Round 3:	_____	_____	_____
Round 4:	_____	_____	_____
Round 5:	_____	_____	_____
Round 6:	_____	_____	_____
Round 7:	_____	_____	_____
Round 8:	_____	_____	_____
Round 9:	_____	_____	_____
Round 10:	_____	_____	_____
Round 11:	_____	_____	_____
Round 12:	_____	_____	_____

Round 13: \_\_\_\_\_

Round 14: \_\_\_\_\_

Round 15: \_\_\_\_\_

\* Although the number of rounds possible on this recording sheet is 15, the actual number of rounds will differ. For the sake of realism the number of actual rounds will not be disclosed to the players. (This language will be removed from the actual sheets.)

In my opinion these behaviors or events have strengthened trust among the leaders of our congregation:

In my opinion these behaviors or events have weakened trust among the leaders of our congregation:

On a scale of 1 to 10, with 1 being the lowest and 10 being the highest, I perceive  
the trust among our congregation's leaders to be: (Please circle one number.)

1            2            3            4            5            6            7            8            9            10

## **Appendix D: Informed Consent to Participate in a Research Study:**

### **Playing Games in Church: Trust, Church Growth, and the Public Goods Game**

**Purpose of the Research:** To learn more about the possible relationship between the level of trust present in a session and the numerical decline, stability, or growth of the congregation. This sheet is intended to give you more information and to invite you to ask me questions so you can decide if you would like to participate.

I am Ken Evers-Hood, the pastor of Tualatin Presbyterian Church and a doctoral student at Duke Divinity School. I'm conducting research for my doctoral thesis by studying how PC(USA) sessions play two versions of what is called a public goods game. Participation in this study is completely voluntary and you can choose the level of your involvement. You may choose to stop participating at any time.

**What I will ask you to do:** I will ask you to play two versions of a public goods game and then answer questions about the level of trust you sense in your session. A public goods game simulates a social dilemma in which individual benefit conflicts with the common good. In a public goods game individuals are given units they may think of as their time, energy, or money that might be given to the community. Once given, these units are increased by a small amount, divided equally by the number of participants, and then returned to each player. To protect your identity and to encourage you to play as realistically as possible, the games will be played anonymously. The community

benefits most if every player gives generously. However, because the goods are shared, an individual will personally benefit even if they contribute nothing to the group.

Different versions of these games have been played and studied many times and are believed to show levels of trust and cooperation among participants. In the context of a session the whole group benefits if every elder participates at a high level. However, given the many other demands in the typical elder's life, there are times when elders are tempted to allow others to bear more of the work.

**Benefits and risks:** While much attention has been directed to the importance of pastors in leading congregations, far less study has been directed towards elders and the ways in which sessions lead congregations. It is my hope that this research will help denominational and congregational leaders in the PC(USA) learn more about how to create the conditions in which cooperation may flourish. Although I do not anticipate any risk to you for participating in this study, you are always free to leave the study at any point for any reason. I will not use your name or the specific name of your congregation in the thesis.

**Questions:** Please ask me questions now or at any point during my research. Feel free to contact me by phone or email. 503.957.9111 and [kse4@duke.edu](mailto:kse4@duke.edu). You may also contact my faculty advisor Greg Jones: 919.660.3537 [greg.jones@div.duke.edu](mailto:greg.jones@div.duke.edu).

If you would like to participate, please fill in the lines below:



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Signed Name

Printed Name

Date

## **Appendix E: Recruiting Script**

Dear (Pastor or Clerk of Session), my name is Ken Evers-Hood, and I'm the pastor of Tualatin Presbyterian Church in the Presbytery of the Cascades and a doctoral student at Duke Divinity School. As part of my doctoral research, I'm studying the possible connections between sessions, trust, and church numerical decline, stability, and growth. I have identified your session as a possible participant in this study.

If your session is willing, I would need thirty minutes with them to give instructions and conduct the research. We would play two games that are versions of a public goods game. These games are commonly studied games believed to show levels of trust among the groups playing them. The members of your session would play anonymously and the name of your congregation would not be used in the thesis. All members of your session would be provided with an informed consent document and will be free to participate or stop participation at any time.

I believe this will be a fun opportunity for your session to learn more about themselves and participate in a study that might benefit the entire denomination. If you are interested, I will be happy send you more information and schedule a date to meet with you.

Many thanks, Ken Evers-Hood



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## Biography

The Rev. Kenneth Scott Evers-Hood was born in Minneapolis, Minnesota on September 2, 1975. Ken was awarded a National Merit Scholarship and attended The University of Texas at Austin, graduating Phi Beta Kappa in 1998 with a Bachelor's Degree in Honors Humanities. In 2001 Ken earned a Master of Divinity from Princeton Theological Seminary. Mission Presbytery of the Presbyterian Church (U.S.A.) ordained him to the office of Minister of Word and Sacrament, now known as Teaching Elder, on November 30, 2001. From 2001 to 2004 Ken served as the organizing pastor of Presbyterian Church of Lake Travis; he also served on the board of the Presbyterian Outlook from 2002 to 2008. In 2004 Ken was installed as pastor of Tualatin Presbyterian Church, a congregation he continues to lead. From 2006 to 2012 Kenneth served on the Committee on Ministry of the Presbytery of the Cascades and chaired the Committee on Ministry Northwest Region from 2009 to 2012.

Ken has published numerous articles. December 31, 2012 the Presbyterian Outlook published "Let's Stop Keeping Theology WEIRD" and a Book Review of Jonathan Haidt's *The Righteous Mind* on January 7, 2013. Duke's Faith and Leadership Journal published his sermon "What Are You Living For That's Larger Than You?" on August 28, 2012. On January 13, 2013 Faith and Leadership published "The Language Christian Leaders Use Matters." In the summer and fall of 2013 Faith and Leadership published a six article series: August 13, 2013 "Renewing the Mind Without Forgetting

the Flesh”; August 27, 2013 “The Struggle Between Our Inner Esau and Jacob”; September 10, 2013 “Checking Our Blind Spots”; September 24, 2013 “Are Our Heuristics and Biases Sin?”; October 8, 2013 “Pastor As Choice Architect”; October 22, 2013 “What Does Game Theory Teach Us About Theological Reflection?” Finally, on March 5, 2014 Covenant Network published an ordination charge Ken offered entitled, “It’s Not About You. It Is About You.”

From 1998 to 2001 Princeton Theological Seminary awarded Ken a Presidential Scholarship including full tuition and a stipend. At Duke Divinity School from 2012 to 2014 Ken was awarded a tuition grant as well as a Doctor of Ministry Scholarship.